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ABSTRACT

Ten papers on the vocational training and placement of severely disabled persons are presented in this monograph. The titles are as follow: "Project Employability: Toward Competitive Employment for Severely Disabled Individuals"; "Vocational Evaluation of Severely and Profoundly Retarded Clients"; "Considerations in Facilitating the Entry of Severely Developmentally Disabled Individuals into Competitive Employment"; "Project Employability Observation and Recording System"; "Development of a Data-Based Pre-Employment Training Program for Moderately to Severely Retarded Adults"; "Placement of Severely Developmentally Disabled Individuals into Competitive Employment: Three Case Studies"; "An Orientation Manual for Employers Who Hire Severely Developmentally Disabled Individuals"; "Job Placement of Severely Disabled Persons: Year One Progress Report"; "Evaluation of Two Shaping Strategies on the Work Production of Mentally Retarded Adults"; "Use of Client Administered Reinforcement to Facilitate Independent Work Behavior in Two Mentally Retarded Adults"; and "Developing Job Interview Skills in Severely Developmentally Disabled Clients." (JH)

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VOCATIONAL TRAINING AND PLACEMENT OF
SEVERELY DISABLED PERSONS

Project Employability - Volume I

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U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Second, we appreciate the support of Peggy Gould and Paul Atkinson in Henrico County and Jane Rhyne in Richmond. We have worked with adult service programs under the supervision of these professionals and are very grateful for their support with parents and agency staff. Similarly, we appreciate the moral support and enthusiasm for our project of JoAnn Marchant, Ed Andrews, Bill Ward, and Geraldine Brandon of Richmond Public Schools.

Project Employability staff deserves an extra special thanks for the long hours. John Fisher, Eileen Apter, Jennifer Keller, and Buck Pentecost played important roles as project assistants. As job coordinators for our field sites, Frances Koehler, Sheila White, and Linda Kochany more than capably helped our clients gain and maintain employment.

A final note of thanks must be expressed to Grant Revell, the State Department of Rehabilitative Services Coordinator of Developmental Disabilities activities. Even before joining the State Department, Grant has been an extremely positive force in our work with severely developmentally disabled

people and has strongly influenced the development of Project Employability. We are deeply indebted to him for helping us work through problems in the local Richmond area and, equally important, understanding the rehabilitation service system.

Paul Wehman
Janet W. Hill

Preface

Project Employability was conceived over a year ago as a means of improving the employability of severely developmentally disabled individuals. The target population has been primarily moderately and severely mentally retarded adults attending adult activity centers. Adult activity programs frequently serve individuals with more severe disabilities. They have been usually excluded from sheltered workshops or competitive employment because of apparent lack of vocational potential.

The primary thrust of the project initially has been to encourage rehabilitation counselors to consider severely disabled clients for evaluation and possible placement into sheltered or competitive employment. We also hoped that our staff could facilitate several placements independent of counselor assistance.

As so often happens in projects of this kind several unanticipated events occurred in our first year of development. Although certainly not inconsistent with project goals of improving the employability of severely disabled individuals, we have concentrated more than we expected on competitive employment job placement. As such we have established several field sites for extended training and eventual placement. We have had the good fortune to place several individuals and put several more into extended training at job sites. None of these persons had ever worked competitively before or had received training in a job site which consisted mainly of nonhandicapped workers.

Our field sites have only been developed within the past eight months and new staff have been added. The next year will allow us to monitor the adjustment of individuals already in the field. We will also help prepare more

severely developmentally disabled individuals for employment. This will include emphasis on development and implementation of more independent living programs, an area which we have been unable to work on because of staff limitations.

Our overall goal is to empirically verify training, advocacy, and placement procedures which adult activity center and sheltered workshop programs through the state might adopt on a smaller scale. We expect to attempt some limited replication activities in other sites than Richmond throughout Virginia.

This monograph has been developed in order to share with other professionals our work on vocational training and placement. We have provided papers and data-based programs which describe our efforts at competitive employment, sheltered work, and independent living skill training. All papers in this monograph reflect what we consider to be important aspects of improving the employability of severely disabled people.

Paul Wehman
Janet W. Hill

PROJECT EMPLOYABILITY: TOWARD COMPETITIVE
EMPLOYMENT FOR SEVERELY DISABLED INDIVIDUALS¹

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PROJECT EMPLOYABILITY: TOWARD COMPETITIVE
EMPLOYMENT FOR SEVERELY DISABLED INDIVIDUALS

The employability of severely disabled individuals is an area receiving increased attention from rehabilitation and placement counselors, administrators, and vocational and special education teachers (Rubin & Roessler, 1979). There is little doubt that vocational training is insufficient without appropriate placement and postemployment counseling services (Mithaug and Haring, 1976). Although significant advances have been made in training a variety of complex manual tasks (e.g., Bellamy, 1976, Bellamy, Horner, & Inman, 1979) and in accelerating production rates (e.g., Karan, Wehman, Renzaglia & Schutz, 1976; Wehman, Renzaglia & Schutz, 1977) with severely handicapped clients, there has not been the same success in job placement. This is especially true in competitive employment situations. It was in response to this need that Project Employability, a Virginia Department of Rehabilitative Services grant, was designed and implemented.

The purpose of this paper is to: 1) discuss the rationale and need for Project Employability, 2) describe the placement and training model utilized, and 3) outline the service delivery model. A representative case study is also provided to illustrate how the project helps severely disabled clients gain and maintain employment.

Purpose of Project Employability

Project Employability was designed in order to facilitate the entry of severely disabled persons into competitive employment. Many of these individuals attend adult activity center programs and have been excluded from rehabilitative services because of initial evaluations which indicated

limited or no employment potential. We have concentrated on these adult programs for the client pool that we work with. Adult activity centers in Virginia, as well as nationally, have usually been a "dead-end" placement for many severely disabled persons, especially the mentally retarded. Typically, services provided in these centers are not vocational in nature, nor do they systematically prepare the disabled adult for entrance into an accredited sheltered workshop or competitive employment. Yet there are frequently individuals who have the potential to fit into the community labor force in some way given the proper training.

Since a major national and state goal is to place unemployed persons into some form of meaningful work, this project is timely. With training and coordinated placement efforts severely disabled individuals may enter the labor force. Project Employability was funded in order to demonstrate the potential of this heretofore wasted human resource. Our program reflects the development, implementation, and refinement of instructional and evaluation technology which is sensitive to the needs of severely disabled clients. This technology has already been applied in sheltered employment (e.g., Bellamy, Horner, Inman, 1979; Gold, 1976, Karan, et al, 1976); however, it must be further applied to the job placement process for those individuals who are ready to leave activity centers.

Project Employability addresses the need to develop a controlled demonstration project which may be replicated in other activity centers. The focus is on implementing necessary procedures required to train severely disabled adults to their potential, make contacts with the community, and subsequently attempt to make placements. The target population has been predominantly moderately to severely retarded adults (IQ-21-50), who have been previously considered to have little or no potential for job placements.

Project staff also accept a limited amount of referrals from local rehabilitation counselors who are having special difficulties in placing severely disabled individuals. In some cases the field sites developed though Project Employability are appropriate for counselor referral.

Placement and Training

We have adapted and expanded the excellent training model proposed by Mithaug, Hagmeier and Haring (1977) and are currently field testing its validity. (The initial case study in the last section of this report provides data on this model).

Figure 1 provides the sequence of activities required to train and place a severely disabled client. Below is a brief description of each of the 10 components involved in the model.

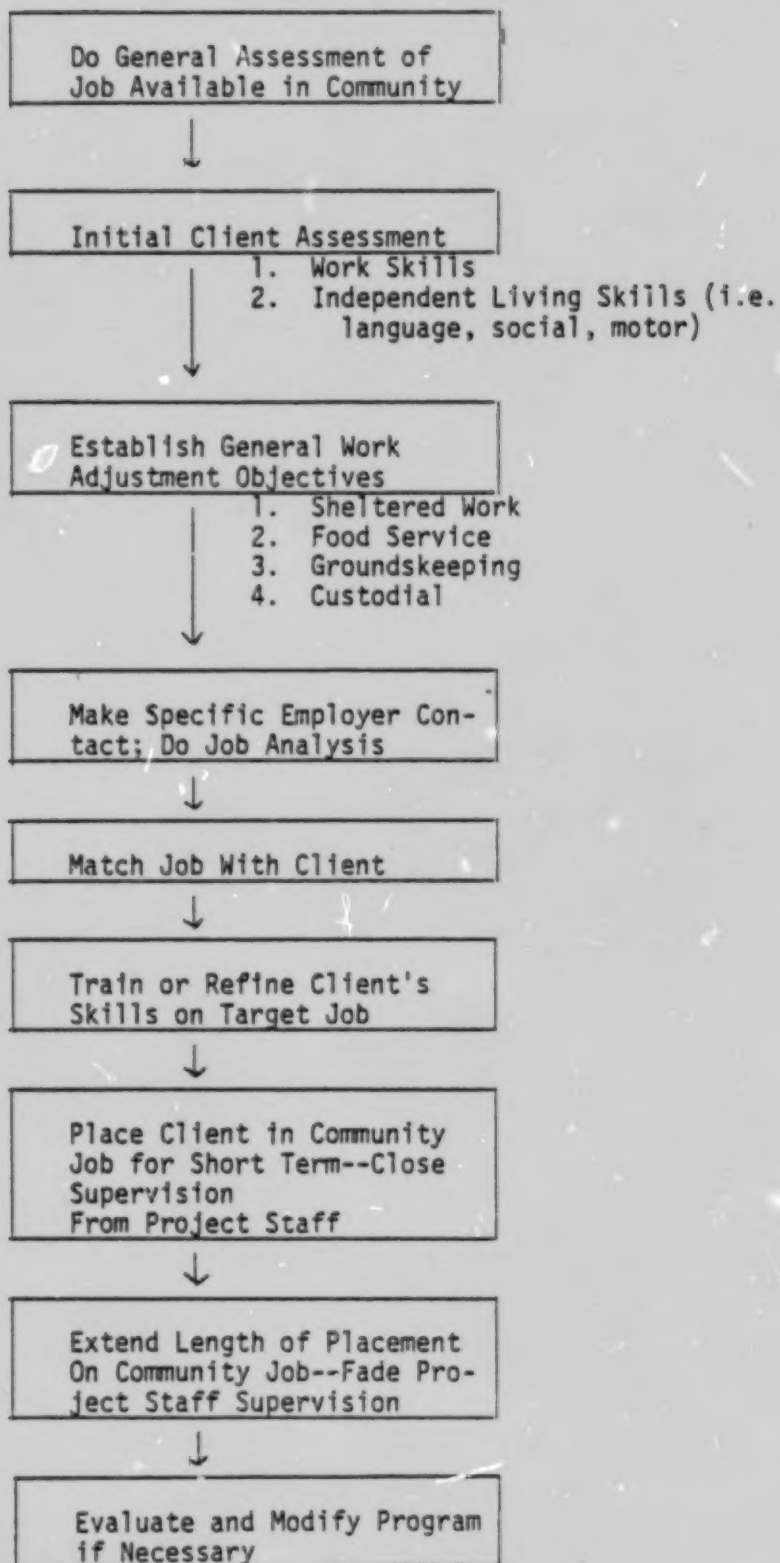
 Insert Figure One About Here

General Job Assessment in Community

The initial step in implementing the program is to do a careful assessment of all possible job opportunities in the community. This entails working with the State Employment Commission, the National Association for Retarded Citizens OJT program, the local Chamber of Commerce, and actively going to local community employers. It may also involve developing new jobs which are appropriate for handicapped workers and which still make a contribution to the community. Utilizing personal contacts to identify possible job openings should also be done. The success of this community contact is fundamental to placement efforts. The range

Figure 1

Training and Placement Model for
Severely Disabled Individuals



of jobs identified as viable for placement will influence the types of jobs which will comprise the initial training program.

Client Assessment

Once a screening of jobs in the community has been completed, trainees will be assessed on general work skill and social skill competencies. Data are collected on the job proficiency of each trainee. Standardized instruments such as the Social and Prevocational Awareness Scale are employed along with direct observation of skill performance on different jobs. Task analytic assessment data are collected on job proficiency. Production rates are also assessed on industrial tasks by computing the number of units completed and dividing this figure by the total number of minutes worked. These assessments are done over several weeks. This information helps determine which individuals have optimal work adjustment skills and subsequently are good candidates for placement. As Revell and Wehman (1978) noted, these data are frequently more valid than test scores with the severely disabled. The selection of a specific job for a client also depends on external factors such as transportation needs, parent attitudes, SSI funding, etc. (See Wehman, Hill & Koehler, 1978 for an indepth discussion of these factors.)

Performance Objectives

From the client assessment data, realistic performance objectives are established. For example, it is usually unlikely that inexperienced trainees are immediately able to begin working a 40 hour week without some field training. Therefore, a more realistic objective would be to set the time frame in which trainees would be expected to work increasing amounts of time. This of course, would be highly dependent on the feasibility of work with the employer.

Objectives for each target client are formulated in whatever areas are deemed critical to the placement. Relevance is the keystone of each objective. Certain trainees may need training in how to use communication or ambulation prostheses as well as vocational training in the selected skill. Most trainees require some instruction in the minimal amount of social skills required to gain some level of employability.

Work Adjustment Program

Our training technology is based on a task analysis approach to content and an operant approach to instructional procedures. Systematic instruction is a process which is dynamic and sensitive to changes in a client performance. The instructional techniques which are employed are characterized by a continuum of least intrusive to most intrusive prompts. This includes

- A. Providing a verbal cue to a client.
If no response, then
- B. Providing a verbal cue plus a model or a gestural prompt.
If still no response, then
- C. Providing a verbal cue plus a physical prompt

If the client still fails to respond, then complete manual guidance may be required utilizing either a forward or backward chaining procedure (Kazdin, 1975). The cue hierarchy system described above is an efficacious means of minimizing trainer intervention, except as needed.

Making the Specific Employer Contact

The initial employer contact is critical in terms of making a placement. During this time a full description of the program, clients' abilities, staff's training capabilities, as well as the generally positive aspects of hiring handicapped workers is related. This contact also provides an

opportunity to find out what other job possibilities are available and what the prevailing sentiment is toward hiring disabled clients.

Some employers, unfortunately, have had disappointments in attempting to work with other programs for the handicapped. These disappointments may be expressed in terms of "The counselor only came the first day," or "No one else was here to teach us how to work or communicate with him," or "They came the first day with the teacher and we never heard from them again." During this contact, we attempt to dispel these concerns and point out the positive aspects of Project Employability. The sincerity demonstrated during this time must be kept to establish a good future working relationship with the company or organization. It is necessary to keep in mind that interacting with businessmen is not the same as interacting with special education and rehabilitation personnel. Mentally retarded clients' capabilities must be presented in general descriptive terms concerning their abilities. Their potential benefit to the company must be presented in business terms, such as the predominantly positive track record which retarded workers have after initial supervision.

Matching Job With Client

An analysis of the specific work environment in which the client is to be placed helps project staff identify potential problems. For example, the type of employee dress, unique physical barriers, and the specific work hours are factors which must be considered and planned for before the placement is made. The job inventory provided by Belmore and Brown (1978) is helpful in matching specific trainee skills and deficits with the unique characteristics of a work setting.

Establishing a Training Period

The establishment of a training period may take place immediately at the job site if the client's skills are sufficiently developed. Approval for field training needs to be given from the Director of Personnel down through the immediate foreman or supervisor. The length of the training period should be based on the clients' abilities, prior training, the job surroundings and the skills involved. The training period is considered as extended training from the classroom or activity center and hence be nonpaid for a short period of time. With some clients, National Association for Retarded Citizens funds may be used for on-the-job training or rehabilitation counselors may provide funds to reimburse employers. For rehabilitation funds to be utilized, however, the counselor must be convinced of the trainees employment potential. This is usually quite difficult with severely retarded individuals who have been previously excluded in most cases. The training period should be presented to the potential employer and parents as a predictor of the client's ability to perform the job accurately, and within the specified time frame.

Field Placement Training and Staff Withdrawal

The training period is a time when the job coordinator and supervisor can work together in helping the client (Cooper, 1977). To a large extent, the rapport between the supervisor and trainee will facilitate his hiring as well as the hiring of future trainees. Project staff's role in this process are twofold. One, there may be a demonstration of how to most effectively work with the trainee. It is important to not work with the client to the exclusion of the real supervisor; if this occurs, there may be difficulties in maintaining work performance once the staff member leaves. The second

function is to be an effective advocate for the trainee with other individuals in the environment. This may include getting media support, explaining the client's role in the work force to others in the work environment who are not informed, or simply helping the trainee get adjusted to unfamiliar work surroundings. Ideally, the immediate supervisor will agree to directly observe the trainee at certain periods of time throughout training. In this way the company will be aware of the progress which the trainee is making. Furthermore, the supervisor can advise project staff in ways that the job may be completed more efficiently.

Program Evaluation

Project Employability utilizes continuous self-evaluation techniques. These include such measures as rate data, frequency and interval data, and other quantifiable indices of job proficiency. Similar evaluative measures are employed in social and community preparation skills. By daily graphing of results we are able to immediately identify breakdowns in the program and also predict the level of gains which clients are making. A reliable observation and recording system is the cornerstone of the project since it provides a data-based model necessary to ensure accountability.

The following records are kept of the trainee's progress. These include:

1. Observations at different intervals of the day of on-task versus off-task behavior.
2. Recording at different intervals of the day of frequency and type of trainer assistance i.e. verbal, modeling, or physical, required.
3. Recording at the end of each day of the clients' general work behaviors. These include absenteeism, tardiness,

appearance, and social behavior with the supervisor and co-workers.

4. Supervisor evaluations of client performance collected bimonthly.
5. Amount of wages earned weekly.

These data are collected after the hiring at selected follow-up intervals.

This documents the success of the trainee and paves the way for other clients.

Service Delivery

The training and placement model described above provides the conceptual sequence of activities through which a severely disabled client is moved from initial assessment until final placement and employment. However, program design is also an important factor, especially for other agencies to replicate. The service delivery in Project Employability involves staffing plan, inter-agency coordination, and sources of client pool and referrals. Figure 2 provides the service delivery model employed.

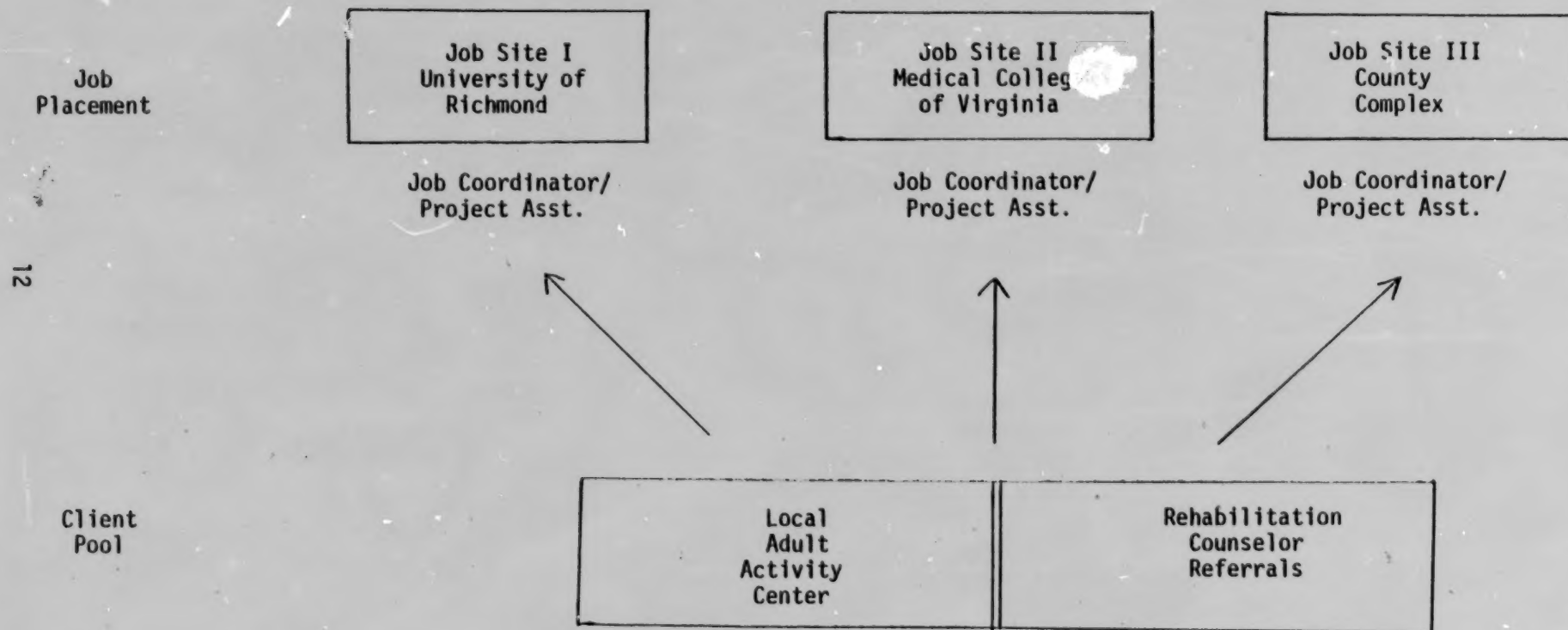
 Insert Figure 2 About Here

Staffing Plan

Project staff involves a Director (25% time), a full time project coordinator, and three job coordinators each who are also full time. Client training and placement responsibility lies primarily with these persons although they are assisted by several part-time project assistants who are graduate students in special education and rehabilitation. Job coordinators are directly responsible for developing and maintaining the job site they are assigned to. This means that they must coordinate with parents, facilitate transportation, work with

Figure 2

Service Delivery Model for Project Employability



rehabilitation counselors, and most importantly, help trainees demonstrate their vocational potential to employers. Job coordinators play a critical role in client advocacy. They also supervise data collection and on-going evaluation measures.

A portion of time is also spent by project staff with the participating adult activity programs. This provides continuity of service and follow-through from the initial point of training to the actual hiring period.

Interagency Coordination

In order to function effectively, it is necessary to relate cooperatively with a variety of agencies and organizations, many which have played an important role in the success of Project Employability. These agencies include:

1. National Association for Retarded Citizens On-the-Job Training Program
2. Local and Regional Rehabilitation Counselors and Referral Groups
3. Local Mental Health and Mental Retardation Boards
4. Companies and Government Organizations which serve as employers
5. National Alliance of Businessmen
6. Various Media Sources i.e. school and local newspapers, radio, T.V.
7. Virginia Employment Commission
8. Local CETA funds
9. Reviewing other States' Innovation and Expansion Placement-oriented grants

By utilizing whatever resources are possible from each of these agencies the project has benefited. It is critical to involve these agencies and resources in order to minimize duplication of service and program development.

Furthermore, this type of involvement provides for new thoughts and ideas in project development.

Client Pool

Project Employability has focused primarily on individuals with moderate to severe mental retardation (IQ-20-51) for placement. The majority of these persons are usually in institutions, sheltered workshops, adult activity centers or at home. Many have been excluded from rehabilitative services because of the difficulty in finding a job for them. Those who are placed in a competitive employment situation often require more initial supervision and post employment counseling than service counselors have time for. Therefore, we have concentrated in our first year in demonstrating the competitive employment potential of these individuals.

Similar individuals are also referred to us for local rehabilitation counselors who are working with "marginal" clients, that is, those clients who are difficult to place. We anticipate in the second year of the project to concentrate heavily on working with those individuals with severe cerebral palsy.

The case study below provides an indication of how the Project Employability trainer-advocacy model works. We have selected a client from a local adult activity center for presentation. He has never worked before.

Representative Case Study - Food Service Placement

Behavioral Characteristics. Chuck is a 22 year old male with a measured intelligence quotient of 27. He has been classified as severely mentally retarded. Chuck is nonverbal yet follows one-step instructions and

exhibits most self-care skills independently. His social behavior is outgoing and friendly, but he has no reading or computational skills. Chuck is also free of any physical or sensory impairments and lives with his family. Table 1 provides an excerpt from a recent rehabilitation evaluation of his work potential. This evaluation was completed by a licensed psychologist.

 Insert Table 1 about here

Previous Vocational Training History. Chuck was attending an Adult Activity Center when Project Employability staff began to work with him. His previous vocational training involved a limited amount of domestic skill instruction when he attended public school. Chuck had never worked for wages, either in sheltered or competitive employment.

Job Requirements and Setting. The job identified for Chuck was a kitchen utility position in the student union at a small university near Chuck's home. Requirements for this job included cleaning tables, sanitizing trays, emptying ashtrays, and other related clean-up work. The hours were from 9 am to 3:30 pm Monday through Friday. Chuck was expected to function independently since his supervisor was in and out of the area all day.

The student union was most crowded during lunch hours. There were a number of college students and professors that regularly visited the student union.

Job Training. Chuck was hired for the job after an initial round of discussions between Project Employability staff and supervisors of food service at the university (See Wehman, Hill & Koehler, 1978 for more information on this process). Previous to his interview he had undergone a

Table 1

Excerpt of Rehabilitation Report on Chuck

Chuck is a small mongoloid white man, who looks much younger than 21. He is mostly without speech though it is possible to understand an occasional word in his usual monosyllabic utterances. He is pleasant, smiling and cooperative, a little given to perseverative and ritualistic behavior.

Measure of intellectual function derived from the FRPV forms A and B yield IQ scores of 27 and 30 respectively. This is in complete accord with the findings of the school psychologist in 1973. He is in the lower end of the trainable M.R. range - severely retarded.

Chuck is good natured, friendly and willing but realistically unemployable. He can under close supervision do things like simple household chores, leaf raking and he will enjoy it but he is not really employable. Under sheltered workshop condition he may be able to sweep or do some other repetitive perseverative operation.

Test results discover a great deal of organic difficulty, one of the prime results of which is his perseveration. He will, once he starts doing a thing, do it over and over and over until stopped.

I am sorry I cannot give a more optimistic report. Chuck is a very likeable fellow.

food service training program in the activity center. The role of project staff was that of advocacy and training. The basic training model which was utilized involved a verbal prompt to Chuck if he was off-task or performing a job incorrectly. An example of a verbal prompt would be "Chuck, you forgot to empty the ashtray." If this was not effective then the verbal cue was repeated and a gesture provided. If this was still ineffective, then the trainer physically prompted Chuck. The data in the section below indicate the frequency and types of prompts required. As Chuck became increasingly independent, the trainer moved further away and eventually out of his line of vision. Efforts were made to involve the real supervisor in working with Chuck although project staff were readily available to help Chuck interact with nonhandicapped individuals initially. We found this advocacy to be a positive factor in Chuck's success.

Client Evaluation Data. Several sources of data were collected to evaluate Chuck's progress on the job. These are listed below:

1. Absences and tardiness. Chuck has missed 0 days and has not been late in a total of 37 possible days of work.
2. Percent of work time on-task. By collecting daily four five-minute observations (e.g. momentary time sampling) of Chuck's work behavior, we were able to document his overall work rate as being consistent over 75% of the observation. Figure 3 depicts his work rate. This rate was computed by looking at Chuck's work behavior every 10th second in five minute intervals and recording his on or off task behavior. On-task was defined as: "Cleaning tables, returning trays to dishroom, walking to dirty tables, and cleaning counter areas."

3. Frequency of Trainer Prompts. Figure 3 also indicates the level of verbal, gestural, and physical prompts which project staff had to provide Chuck. These data were collected in four ten-minute observations, and indicate that on the average less than three prompts per day were required. Unfortunately, this data system was implemented after Chuck had been working for several weeks. Hence his initial need for trainer assistance is not accurately portrayed. Reliability for this was computed by dividing the total number of agreements by the total number of observations. The total reliability was 92%.
4. Supervisor Evaluations. The most recent supervisor evaluation is reported in Table 2. Supervisor evaluations were collected bi-weekly.
5. Total Wages Earned. Since beginning work Chuck has earned a total of \$757.30 over 37 days of paid work. (This is computed at a wage of \$2.65/hour.) He is also receiving full fringe benefits as well.

 Insert Figure 3 and Table 2
 here

Summary .

The purpose of this paper has been to present an overview of Project Employability. The 10-component Training and Placement Model was initially

CHUCK- KITCHEN UTILITY

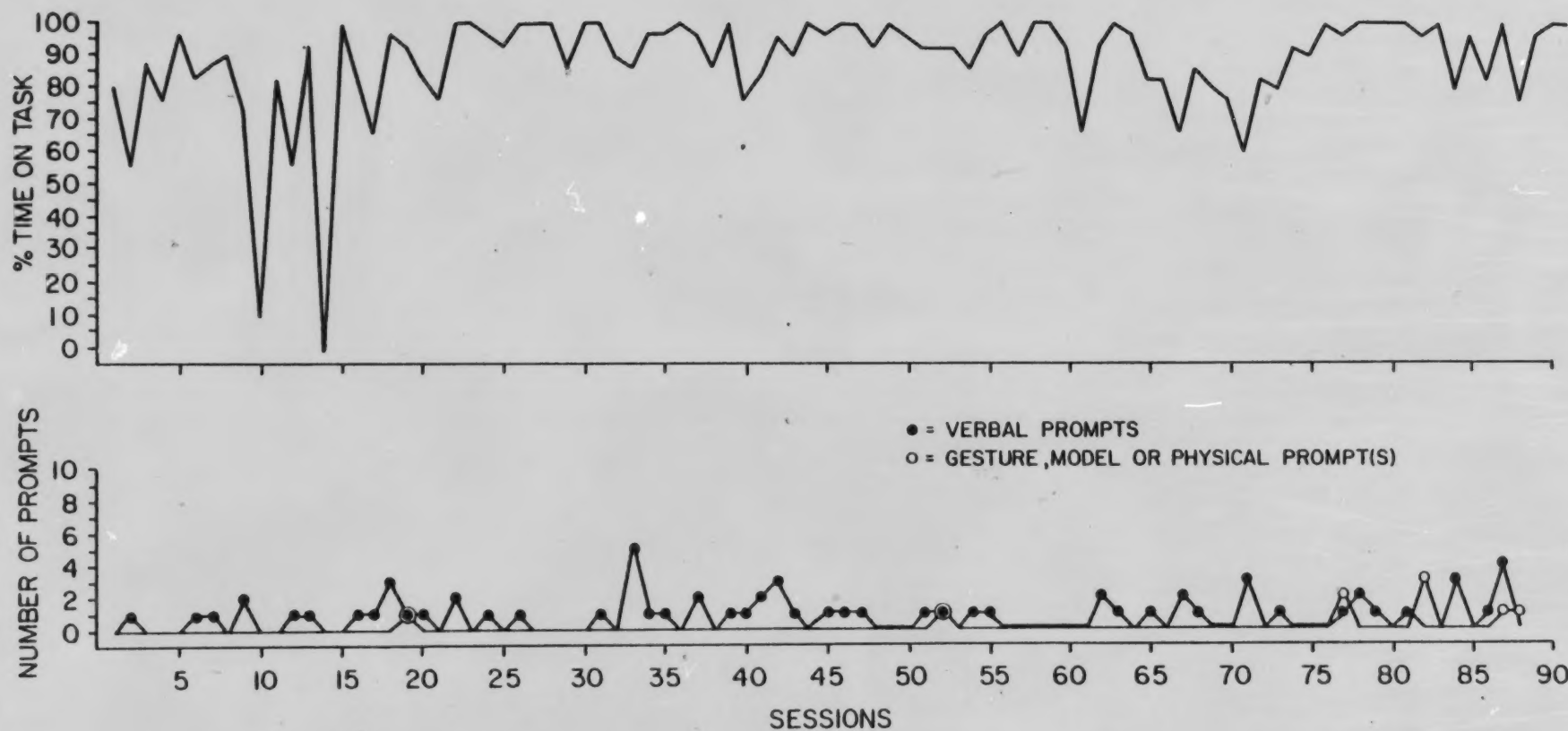


Table 2

SUPERVISOR'S EVALUATION FORM - BIMONTHLY

TRAINEE/EMPLOYEE'S NAME "Chuck"
 JOB TITLE Kitchen Utility
 JOB SITE _____
 JOB COORDINATOR _____

DATE OF PLACEMENT 9-25-78
 DATE HIRED 10-23-78
 CURRENT DATE _____

PLEASE CIRCLE ALL ITEMS WHICH APPLY TO THE TRAINEE/EMPLOYEE:

1. The employee ☒ a) generally arrives and leaves on time
☒ b) maintains good attendance
☒ c) takes meals and breaks appropriately
☒ d) maintains a good appearance
 Comments on un-circled items: _____
2. The employee has ☒ a) mastered all aspects of present job
☒ b) mastered many but not all aspects of job
☒ c) not mastered essential aspects of job to date
Filling of spray bottle
3. In order for the employee to follow directions regarding the job, the supervisor ☒ a) can just give verbal instructions
☒ b) has to give many gestures as well as verbal instructions
☒ c) has to show the employee exactly what to do before he/she knows what to do
4. Project Employability staff is present
☒ a) too often
☒ b) too little according to the employee's needs
☒ c) an appropriate amount of time
5. This employee ☒ a) frequently stops work and needs to be reminded to return to work
☒ b) works at a constant rate without reminders
☒ c) stops working occasionally but no more than other employees
6. The employee is ☒ a) a good worker
☒ b) an average worker
☒ c) a below average worker
7. Does the Project staff in any way interfere with your supervision or plans for the employee? ☒ a) no ☒ b) yes (if yes, please briefly describe)

Other comments: Chuck's appearance has improved with
keeping his shirt in

SUPERVISOR G.D.

described as it relates to working with severely developmentally disabled individuals. The problems encountered in placing severely disabled individuals into competitive employment situations were briefly discussed.

Project Employability service delivery system involves a staffing plan characterized by a project coordinator, three job coordinators, and several assistants all who concentrate primarily on identifying appropriate jobs and employers for the severely disabled trainees with which we work. Job sites have been established at a small university, a large hospital; a third site is being developed in a local county complex.

Working successfully with a variety of agencies i.e. National Alliance of Businessmen is an important factor in the impact which Project Employability has. Furthermore, CETA funds, NARC funds, and local rehabilitation counselor case funds are some of the resources available if employers are not prepared to hire a trainee with their own funds.

The representative case study provided an illustration of how a client is placed and continually evaluated. The data for this client support his ability to work competitively once the necessary training and advocacy services were provided. Ultimately, for Project Employability to have the greatest effect it will be necessary to replicate our work on a smaller scale in different sites throughout the state and perhaps region.

Acknowledgements

The development of Project Employability could not have reached its present level of success without the excellent program work of Janet Hill, Project Coordinator, and Frances Koehler, Sheila White, and Linda Kochany, Job Coordinators. The administrative support of Mr. Jim Cook and Paul Basett at Virginia Rehabilitative Services is gratefully acknowledged.

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VOCATIONAL EVALUATION OF SEVERELY AND
PROFOUNDLY RETARDED CLIENTS^{1, 2}

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Vocational Evaluation of Severely and
Profoundly Retarded Clients

One of the more difficult problems currently facing rehabilitation counselors is evaluating the employment potential of severely handicapped people. Since the Rehabilitation Act of 1973 emphasized the need to increase services to the severely disabled, this presents a problem that counselors, workshop evaluators, and other placement specialists have been attempting to work through. If severely disabled persons cannot receive a reliable evaluation of their work potential, then it is unlikely that workshops and community employers will be willing to employ severely handicapped clients.

A severely handicapped person is defined as follows in the Rehabilitation Act of 1978: "a handicapped individual who has a severe disability which seriously limits his functional capacity, who will require multiple vocational rehabilitation services, and who is experiencing substantial functional limitation due to a combination of disabilities." Since implementation of this legislation, there has been a marked increase in the number of the severely handicapped being served by state agencies. This increase is related to identification of currently active clients who meet the criteria for severe disability and expansion efforts of state agencies and service delivery staff as their awareness and knowledge of the severely handicapped grow.

Many factors still exist, however, that are limiting the availability of vocational rehabilitation services to severely handicapped persons such as the severely and profoundly mentally retarded. For example, one difficulty includes the lack of sufficient guidelines in the 1973 Act to give direction to counselors attempting to serve the severely handicapped. In most cases,

counselors continue to carry full responsibility for serving all clients, with severe and nonsevere disabilities. The caseloads tend to be quite heavy with little opportunity to specialize in one disability area. As a result, service delivery staff must develop their own personal knowledge concerning the needs and potential of the severely handicapped and then apply this knowledge to improving service delivery systems. Many Master's level counselors have training of a general nature to meet the varied demands of a field caseload where many different disability groups with individual needs are served. Their training background, along with the demanding responsibility in terms of time and energy entailed in carrying a state agency caseload is a prohibitive factor in developing expertise with the severely disabled.

Severely and profoundly retarded clients are part of the severely handicapped population who have not benefited significantly from direct service delivery by state vocational rehabilitation agencies. These persons are usually nonverbal, have limited receptive language, and frequently display inappropriate social behavior (Wehman, 1976). The range of measured intelligence is between 0 and 40. Counselors as a group do not have the knowledge needed to understand and work successfully with this population. Fortunately, a significant body of knowledge has been developed that indicates that behavior modification techniques are the most effective means currently available for training the severely and profoundly retarded (Bellamy, 1976; Gold, 1973). Wehman (1976) states that a behaviorally oriented rehabilitation counselor should have the following characteristics:

- 1) a complete working knowledge of the principles of behavior management,

- 2) a commitment to a data-based system of training and programing,
and
- 3) practical experience with severely retarded populations.

The opportunity to develop these characteristics is not usually a part of standard graduate programs in rehabilitation counseling, and the opportunities in these areas once employed by the state agency are also limited except for the individual initiative of service delivery staff. Therefore, weaknesses of the rehabilitation education and the state agency inservice training programs have resulted in service delivery staff's being unprepared to work successfully with the severely and profoundly retarded.

Another factor that has significantly slowed the expansion of rehabilitation services to the severely retarded is the Act's emphasis on employability as the rehabilitative goal. Societal expectations for the severely retarded in the past have not included employment beyond menial sheltered, nonproductive activities (Gold, 1973). Furthermore, given the present state agency service delivery system available to counselors, a prediction of employability is required before long-range services can be funded. This prediction is usually based on background information, observations of behavior, performance on psychological and vocational testing, and performance in sheltered public education, institution, or workshop programs identified as vocational. Severely and profoundly retarded persons are currently predicted to have little employment potential by state agency personnel, and as a result these potential clients are being denied services. Inasmuch as there is a wealth of literature to indicate that the severely and profoundly retarded are potential successful clients

of state vocational rehabilitation agencies, even with employability as the key determinant (Bellamy, 1976; Karan, Wehman, Renzaglia & Schutz, 1976), it is imperative that alternative means of evaluating employability and work potential be developed. Therefore, the purpose of the following report is to:

1. review vocational evaluation and training issues and practices that currently affect the delivery of vocational rehabilitation services to severely and profoundly retarded individuals;
2. review alternative means of evaluating employability;
3. discuss the special considerations needed to bring about inclusion of the severely and profoundly retarded into the vocational rehabilitation system.

Vocational Evaluation

Vocational Evaluation is a "comprehensive process involving an interdisciplinary team approach to assessing an individual's vocational potential and training and placement needs (Brolin, 1976, p. 81)." Vocational evaluation can consist of four components:

- 1) clinical assessment,
- 2) work evaluation,
- 3) work adjustment, and
- 4) on-the-job tryouts.

Clinical assessment consists of the collection and interpretation of medical, social, educational, and psychological data. Work evaluation can be defined in terms of the information sought by evaluators concerning employability, work habits and attitudes, specific work skills, and

vocational needs. The results of the first two parts of the vocational evaluation frequently preclude the severely retarded client from taking part in work adjustment and on-the-job training because of limited indications of their potential for vocational skill development. It is apparent, however, that the traditional approaches to clinical assessment and work evaluation are not appropriate for the severely and profoundly retarded (Gold, 1973).

A major aspect of clinical assessment is the intelligence test. IQ determination and the resultant labeling of the probable level of retardation are limiting factors for the severely and profoundly retarded. Gold (1973) states that most studies indicate the limited value of IQ scores as predictive measures of actual work performance. Furthermore, standardized tests are of limited value in making predictions on employability of severely and profoundly retarded person because most tests have not been standardized with this population. Usually, standardized tests result in homogeneous groupings of severely and profoundly retarded clients. As a result, individual differences and potential are lost in the limited expectations held for this population. It is of questionable utility to use standardized tests that are not normed on a severely retarded population, have unproven predictive validity, and serve mainly to mask individual differences through grouping. These factors do not include the true placement potential of severely and profoundly retarded clients.

A work evaluation provides an evaluator the opportunity to observe and test the client's current skills and to make judgments on needs and potentials for further vocational programing. The work evaluation consists

of four components:

- 1) vocational testing,
- 2) intake and counseling interviews,
- 3) work and job samples, and
- 4) situational assessment.

The criticisms regarding standardized intelligence tests also apply to standardized vocational tests. Neff (1968) further states that the limited work history of retarded trainees reduces the value of standardized vocational testing as viable predictors of employability. Information available through interviews with severely and profoundly retarded people is usually minimal because their language skills are generally restricted to receptive understanding with limited expressive verbalization (Wehman, 1979; 1976). Interview information is gathered by talking to family members or others interested in the client's welfare.

The work and job sample portion of the work evaluation is the evaluator's first opportunity to structure specific vocational tasks that are appropriate for the retarded client. Work and job samples usually consist of commercially developed work samples that have been standardized, samples of jobs taken from community workshop or industrial situations, and work tasks developed within the evaluation lab. There are many factors working against lower-functioning retarded persons in competitively completing the work and job samples. Until recently, commercial work samples were not designed for use by severely and profoundly retarded clients; normative data were established on those in the higher ranges of retardation. Furthermore, audiovisual formats are usually involved in presenting instructions. Also, the degree of difficulty of the

sample tasks is usually quite high when compared to the vocational experience of most severely or profoundly retarded individuals. The Vocational Information and Evaluation Work Samples (VIEWS) system developed by the Jewish Vocational Service (1977) is a recently marketed work sample system designed specifically for the retarded. Although evaluative data on its use for work placement decisions for severely and profoundly retarded clients are limited, there may be advantages of this system. These are discussed in a later section of this paper.

In discussing the work and job sample phase of the vocational evaluation, it is important to distinguish between acquisition and production (Wehman, Renzaglia, Schutz, 1977). There are many references in the literature to the importance of making this distinction. Acquisition is defined as learning ability, performance as production ability. Research indicates that the speed with which a retarded person learns a task cannot be used to predict the speed at which he will produce once the task is learned (Gold, 1973; 1975). Furthermore, research indicates that nonmotor abilities are important during the early stages of learning but, once learned, differences in nonmotor abilities do not affect the production of a task. Finally, the attention theory of learning states that the learning curve of the retarded is very similar to the learning curve for the nonretarded; the significant difference is that the retarded take longer to learn a new task. The applicability of this research to work evaluation through work samples is as follows:

1. It should be understood by work evaluators that the job sample phase of an evaluation is made up of tasks that usually must be learned by the severely/profoundly

retarded client before evaluation of performance can be accurately completed.

2. Because of the limited vocational exposure of the severely/profoundly retarded, many necessary prerequisite behaviors might not be a part of the client's behavior repertoire, i.e. tool usage, attending behavior, or positioning at the work bench.
3. The completion of the task might not be, in itself, reinforcing to the client; reinforcers should be identified that are shown to be effective, i.e., that their usage results in an increase in desired behavior.
4. Precision teaching techniques are frequently needed to teach a client how to perform the job sample task (Bellamy, Peterson, & Close, 1975).
5. Statements on productivity and resulting decisions on employability cannot be accurately attempted until the client demonstrates learning through reaching a criterion level of performance as measured by a data-based information gathering system.
6. Failure to learn the assigned task should be identified by the evaluator as a function of external variables, including environmental distractions, ineffective teaching methods, and lack of appropriate reinforcement contingencies, as compared to being a function of internal limitations of the client.

The implication leading from these six points is that the evaluation period should be used as a time of training. A significant body of research information has been developed that clearly indicates that severely and profoundly retarded persons can be trained to complete complex vocational tasks at industrial standards of speed and quality with low error rates (Bellamy, 1976; Spooner & Hendrickson, 1976).

In summary, instructional techniques should be used to train clients to criterion during the work and job sample phases of the vocational evaluation. Criterion levels should be established according to the requirements of the job environment that the client can be expected to move to once training has been completed. Client's performance in production, during situational assessment in a real or simulated work setting, should be monitored using a data-based measuring system. Predictive statements on lower-functioning retarded clients' employability should be based on work (production) performance after training to criterion. These statements will have significantly greater credibility in determining feasibility for vocational rehabilitation services.

Alternative Vocational Evaluation Procedures

To this point, we have noted that traditional vocational evaluation procedures frequently do not provide useful information regarding the employability of the severely retarded. Gold (1973) states that, until evaluation procedures that are proven to have predictive value of severely and profoundly retarded are developed, results of the vocational evaluation for this population should be stated in descriptive rather than predictive

terms. It has been further demonstrated that the use of systematic instruction techniques in structured training situations frequently results in retarded trainees' developing standard levels of vocational skills on complex assembly tasks. This information indicates that, given proper training conditions, severely and profoundly retarded persons can be expected to develop useful vocational skills. Therefore, it is apparent that, when working with severely retarded clients, a primary purpose of the vocational evaluation should be to provide descriptive information on the training methods needed to develop their vocational potential.

It is still necessary, however, that evaluators make predictive statements regarding the vocational potential of the severely retarded. Bellamy (1976) points out that funding resources are not presently available to provide the services to all severely handicapped people mandated by the Rehabilitation Act of 1973. He further states that the evaluation process will be used by state agencies to decide which clients will receive the available resources. He concludes that predictive evaluation statements that provide information regarding the training time, trials, and costs needed to bring individual severely retarded clients to employable levels will be most useful in determining who receives available resources. The Trainee Performance Sample (TPS) is an alternative vocational evaluation procedure designed to provide evaluators with information on which to make predictive statements regarding the time and cost needed to develop criterion level skills in severely retarded clients (Bellamy & Snyder, 1976).

The TPS consists of 30 items developed to incorporate the following objectives:

1. require the individual to make a specific object mani-

- pulation or assume a defined hand position;
- 2. require that this movement be performed after a specifically defined trainer cue, involving a verbal direction and either a model of physical prime;
- 3. necessitate that the individual make a defined discrimination to complete the movement correctly;
- 4. allow the individual to respond a second time to the same task, immediately following a repetition of the trainer cue if the first task was incorrect and a presumed reinforcer if the first attempt was correct.

An example item involves the use of a nut and bolt. The bolt has a red colored midsection. To complete this item correctly, the trainee starts with the nut at the top of the bolt and must turn the nut until it covers the colored midsection. Training is accomplished through the trainer's demonstrating the desired skill, giving the trainee an opportunity to perform the same skill, and then providing either reinforcement or correction depending on the correctness of the trainee's performance. Corrections involve verbal directions, models of the correct response, or physical primes.

The training phase of the TPS incorporates many of the principles of systematic instruction that are effective in training the severely and profoundly retarded; several of these techniques are step-by-step instructions and demonstrations, defined correction procedures, and reinforcement. Available research data indicate the scores on the TPS are reliable across time. The predictive value of the TPS, however, is based on the relationships between test scores and vocational training factors such as time

required for training trials needed to reach criterion, and cost of training. Validity studies designed to investigate time and trial factors in vocational training of severely retarded adults resulted in correlation of above .75 between TPS scores and training time and trials on marketable vocational tasks in four of seven samples. Although additional study is needed, the TPS appears to be a valuable alternative vocational evaluation procedure because of its apparent face and predictive validity for severely retarded rehabilitation clients. However, the TPS bases its predictions on acquisition performance. Predictive statements are of the greatest value when based also on performance during production after criterion has been reached.

Another means of alternative vocational evaluation is the Vocational Information and Evaluation Work Samples (VIEWS). This test is a recently developed work sample system designed specifically for the mentally retarded. Severely retarded persons were included in the normative data. The VIEWS system consists of 16 work samples from 4 work areas: elementary tasks such as handling, clerical, machine, and manipulative crafts. The evaluation process consists of orientation, demonstration, training, and production. Trainees are given the opportunity to reach criterion levels of performance. Evaluation of performance begins during the production phase once criterion performance has been reached. The importance of the VIEWS system for the severely retarded is as follows:

1. The work sample tasks are modeled on industrial tasks for which there is employment potential for the retarded.

2. The trainee has the opportunity to learn the desired skill before performance measurements are begun. Learning can include the development of needed prerequisite behaviors.
3. Reinforcement and behavior management principles can be used during the acquisition phase of evaluation.
4. Predictive statements on performance are based on measurements taken during production after a standard criterion level of performance has been acquired.
5. The evaluator can assess the environmental factors that are affecting learning.
6. Predictive statements are based on both client and industrial norms.

The VIEWS system is an alternative evaluation procedure designed specifically to assist evaluators in making predictive statements concerning the employability of the retarded. It overcomes many of the previously discussed weaknesses found in traditional vocational evaluation procedures when these procedures are applied to the severely retarded. Gold (1973) states that the basic concept of work samples appears to be the most effective evaluative tool for use with the severely retarded if acquisition could be separated from production. The VIEWS system separates acquisition from performance, and it is a valuable addition to the resources available for use in evaluating the severely retarded.

Discussion

The preceding discussion of the application of traditional and alternative techniques of vocational evaluation to the severely and profoundly retarded indicates that special considerations need to be given to the evaluation of this population. An additional consideration as defined by Bellamy in predicting the employability of the severely retarded is practicality (Bellamy & Snyder, 1976). Practicality is the consideration of the availability of treatment and training services needed to develop the desired skills in severely and profoundly retarded clients. Vocational evaluation reports including both valid predictive statements of the client's vocational potential and descriptive statements of the type and degree of training services needed to develop this potential are extremely useful to service delivery staff. Reports completed at community evaluation centers should include recommendations for use of specific settings to assist the counselor in determining appropriate placements. In order for this information to be accurately stated in the report, evaluators would have to survey the service delivery settings available in the community. This activity would give the evaluators a more practical base of information for use in completing their evaluation reports. There are many cases where evaluations are completed at regional or state centers, and the size of the geographic area served makes onsite surveys by the evaluators prohibitive. However, including specific information regarding training contingencies in the evaluation report greatly enhances the value of the report for the service delivery staff.

A final consideration of importance in discussing the inclusion of the severely retarded in the vocational rehabilitation system is the avail-

ability of employment for this population in the community. Belmore and Brown (1976) through use of the Job Skills Inventory (JSI) and Mithaug, Hagmeier, and Haring (1977) both stress the need to complete a job survey and analysis prior to initiating evaluation and training services for the retarded clients. It is important that those involved in predicting and developing the employment potential of the severely retarded know as early in the rehabilitation process as possible the vocational goals realistic for individual trainees. These goals involve both the potential skill development of the severely retarded person and the opportunities available in the community for use of these skills.

A group for whom this information and longitudinal planning are particularly important is the school-age severely retarded population. It is also the group for whom vocational rehabilitation services appear to have the greatest implication at this time. Vocational rehabilitation agencies are being called on to provide technical assistance to service settings working with those who are considered too severely handicapped to benefit substantially from direct vocational rehabilitation services. Although it is our position that severely and profoundly retarded clients can be effectively served by vocational rehabilitation agencies, in reality very few of these potential clients are being given serious consideration at this time for direct services. Technical assistance could be provided to school settings that work with the severely retarded in the following ways:

1. making available employment information concerning the community in general and in regard to the retarded population in particular;

2. assisting the schools in coordinating their prevocational and vocational programs with the training and employment opportunities that will be available to the severely retarded upon their completion of school;
3. providing consultation or direct evaluation services to assist the schools in setting realistic objectives and effective longitudinal plans for their students;
4. initiating and following through on efforts to identify and train service delivery and administrative staff who are willing to increase their professional competence to the point where they will be able to serve the severely retarded effectively.

In summary, state agency vocational rehabilitation services are needed for the severely and profoundly retarded if this severely disabled population is to develop its vocational potential. Even with the voluminous amount of vocational research literature (Bellamy, 1976) that has accrued in recent years demonstrating the work capacities of the severely retarded person, a very small fraction of the severely and profoundly retarded are actually employed and in the nation's labor force. It is imperative that greater efforts now be directed toward placing the severely retarded into community employment and industrial workshops; applied research efforts that document the efficacy and long-term impact of on-the-job training programs are required. Vocational evaluation must move out of the laboratory and increasingly take place in a natural environment of work settings.

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CONSIDERATIONS IN FACILITATING THE ENTRY OF SEVERELY
DEVELOPMENTALLY DISABLED INDIVIDUALS INTO
COMPETITIVE EMPLOYMENT

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Considerations in Facilitating the Entry of Severely
Developmentally Disabled Individuals Into
Competitive Employment

Within the past decade there have been ample illustrations of the sheltered work potential of moderately, severely, and profoundly handicapped individuals. Initially, Crosson (1969), and then Gold (1972; 1974; 1976), demonstrated acquisition of complex manual assembly tasks in moderately and severely retarded persons. More recently, Bellamy and his colleagues have extended this earlier research considerably by employing different tasks (Bellamy, Peterson & Close, 1975; Hunter & Bellamy, 1977; O'Neill & Bellamy, 1977), and with a severely and profoundly retarded population. In conjunction with these studies have been demonstrations of how trainer-administered reinforcement (Brown, Bellamy & Sontag, 1971; Wehman, Renzaglia, Schutz & Karan, 1976), self-administered reinforcement (Helluck, Paluck & Klein, 1976; Wehman, Schutz, Bates, Renzaglia & Karan, 1978), massed practice training (Close, Irvin, Prehm & Taylor, 1978; Wehman, Schutz, Renzaglia & Karan, 1977) and cue redundancy (Renzaglia, Wehman, Schutz & Karan, 1978) can accelerate work rates.

The results of these studies suggest that severely developmentally disabled individuals can succeed in a sheltered work environment. Although this is a positive development, it still falls considerably short of job placement into competitive employment (Mithaug & Haring, 1977; Urdane, 1976). There are several reasons for this. First, few sheltered workshops pay the minimum wage but rather compensate on a piece rate basis. Subsequently, many workers earn only \$80 to \$100 a month, if

that. Secondly, sheltered employment is primarily restrictive; that is, it includes only handicapped workers and therefore limited opportunities for interaction with nonhandicapped individuals. Sheltered employment unfortunately perpetuates segregated programming. Furthermore, in sheltered workshops there are rarely the full spectrum of fringe benefits, i.e. Blue Cross, which are available in many competitive employment situations. A final limitation of sheltered employment is that it is often a needlessly terminal placement for many individuals. It becomes terminal because the employee is a critical part of the production process and invariably is "carrying" several less productive workers. Therefore, the workshop supervisor may be reluctant to move the worker into competitive employment from the shop.

It is the purpose of this article to describe the factors involved in helping severely developmentally disabled individuals enter competitive employment. The information contained in this report complements the job inventory strategy guidelines presented by Belmore and Brown (1978). Through implementation of Project Employability, a Virginia Department of Rehabilitative Services funded project, we have been working with moderately to severely retarded adults who heretofore have been excluded from vocational rehabilitation services because of their lack of demonstrated employment potential. This project utilizes a unique on-the-job training model by which a trainee is placed in a potential job opening in the community and supervised on a continual, but gradually decreasing basis by project staff. The project staff member serves as a means of assurance to the employer that the job will be completed even during the initial stages of training and to

the trainee and his family that the needed skills will be acquired for employment. As the prospective employee's performance reaches appropriate standards, the employer may, then, exercise his option to officially hire the trainee. Extensive follow-up services are continued by the project staff. This paper is based on experiences which we have had in placing severely disabled individuals through the utilization of this model and is directed to special and vocational education teachers, job coordinators, and rehabilitation counselors. It is divided into sections on job selection and working with employers.

Factors to Consider in Job Selection

There are numerous client related variables which must be evaluated before job placement. Because potential job openings for severely disabled individuals are often difficult to locate, program staff are frequently tempted to decide arbitrarily which trainee is most suited for placement in a rare job opening rather than search for job specifications which most suit a given individual. In this regard, Mithaug, Hagmeier, and Haring (1977) have noted:

"We can begin by focusing upon one job at a time, rather than trying to analyze the entire job market at once. Also, we should specify the most probably job placements for our client's immediate career. Finally, we can analyze the job situation of selected placements, noting and listing the work skills and habits necessary for entry... Unfortunately, information on methods to use in this assessment is not available. All we can suggest is that the focus be on the job supervisor... (p. 91)

We have found that there are several other factors which must be considered. These points are discussed below. They are essential in order to identify the most appropriate job for a severely handicapped client.

Client Previous Work History

Systematic vocational instruction for severely handicapped individuals has been in practice only in recent years (e.g., Bellamy, Horner & Inman, 1979). Therefore, examination of the previous work record of a severely handicapped adult will frequently yield a history marked by successive failures. The severely handicapped have, in the past, been dismissed from public school vocational education programs, sheltered workshops, and even community-based activity centers under the rationale that progress was not possible. However, even a record of failure may provide important information when considering job placement. Through this record, specific breakdowns in programming can be identified. Examples of this might include client preference for certain reinforcers, lack of seizure control, or volatile behavior problems, which occur under different conditions.

An investigation of previous work may be done by initially surveying the following sources:

1. Parents and family members
2. School personnel
3. Rehabilitation intake workers and counselors
4. Case managers or social workers assigned to the trainee
5. Written records from schools, activity centers, or workshops

These sources frequently document some aspect of the trainee's previously attained production rates, quality of work, length of work history, and level of independence in a work setting. The work attitude of the trainee as well as the family's attitude toward work and transportation needs may also be available. An analysis of this information, which is

admittedly not always a valid predictor of job success (Gold, 1973), can nevertheless help the job coordinator avoid the mistakes which may have been made earlier.

Client Functioning Level and Physical Characteristics

Once previous job history information has been gleaned, then a careful analysis of the client's functioning level should be undertaken.

Mithaug & Hagmeier's (1978) Prevocational Assessment Checklist is one possible assessment tool which might be utilized. Though this tool was designed for sheltered workshops, it has numerous items which would be equally appropriate for those entering competitive employment. The interested reader might also consult the vocational behavior checklists listed by Walls and Werner (1977). From this screening, a list of job categories or types of jobs which most suit the trainee's competencies can be generated. The following client characteristics influence the type and length of job placement:

1. Frequency of on-task behavior
2. Degree of independent mobility
3. Communication skills
4. Degree of self-initiated work behavior
5. Appropriateness of social skills
6. Presence of concomitant handicaps, i.e. vision impairment

Clearly, certain jobs require more of the above stated abilities than others. For example, in order to pick up trash and bag it on a college campus will require independent walking and orienting skills. Well developed social skills might not be necessary. On the other hand, in

order to operate a utility elevator in a large hospital, ambulation skills could be impaired but number identification and selection, fine motor skills, and social skills should be well developed.

We have found other more subtle variables regarding the characteristics of the trainee which may be critical for the ultimate success of a placement. As with nonhandicapped workers, certain trainee personality and physical characteristics when mixed with certain personality traits of the immediate supervisor are related to job success and ease of adjustment to a new work setting. The easiest way of analyzing the interaction of these factors is to have program staff spend time within the work setting before making the placement. It is usually necessary to examine the group dynamics which occur, the flexibility or rigidity of the supervisor, the age and openness of co-workers, and whether other handicapped personnel are present in order to identify critical behaviors necessary for entry in that job site. If supervisors have had previous experiences with disabled employees, and these experiences were positive, there is usually a better opportunity for making the placement.

Supplemental Security Income

One frequently cited obstacle to job placement of the handicapped is the threat of losing guaranteed financial aid payments from the government. Although these payments are relatively low (\$189.40 per month, if no other earned income, as of July, 1978) parents and sometimes clients themselves often prefer the arrival of a guaranteed check each month rather than risk job placement. In addition, if the S.S.I. benefits are reduced to zero dollars per month according to local and federal

deduction formulas, Medicaid benefits are also lost. The loss of Medicaid can be serious for those individuals who require much medication in that Medicaid pays all but 50¢ on every prescription. However, other than this area, a good medical insurance plan gained through employment provides equal or better medical coverage for the working individual.

Placement personnel must approach this aspect of the employment process as a serious concern to all involved and reduction of financial aid due to employment must be fully explained to the family. If the client and family understand these procedures, they will find that during the first 12 months of employment there is little risk of losing all forms of monthly income. That is, if the job is terminated, S.S.I. benefits can be readjusted to the pre-employment level within 10 to 20 days. If an individual clearly must retain Medicaid benefits, it would be wise to arrange for part-time employment rather than a full-time job. In this way, the part-time employee, depending upon his/her rate of pay, would probably retain some portion of S.S.I. benefits and, therefore, remain eligible for Medicaid coverage. The Table below provides a written fact sheet which Project Employability provides to the client and family regarding the effects of employment on S.S.I. benefits.

 Insert Table About Here

Client Living Situation and Transportation Needs

The client living situation is another factor which can play an important role in job selection. For example, the distance of the job from the trainee's home must enter into the decision to seek employment

Table I

The Effects of Employment
Supplemental Security Income (SSI)

When a disabled person who is receiving S.S.I. benefits takes a job, the federal government does not view this person as suddenly rehabilitated or no longer requiring benefits, but rather, the disabled person is viewed as "working regardless of his or her impairment." This is an important statement because it indicates that the government is well aware that this person is still disabled and that if the current job does not work out, the handicapped individual may again require S.S.I. benefits. In fact, the government automatically sets aside a 9 to 12 month job adjustment period during which the benefits can be quickly reinstated (within 10 to 20 days) if the person's new job is terminated for whatever reasons. This grace period indicates that the government encourages the handicapped individual to try to hold down a job, but it also realizes that a handicapped person is handicapped for life. The government, therefore, understands that if job requirements change and the person loses the job, he or she may again require and fully deserve S.S.I. benefits. However, if the job is lost after a 12-month period, the disabled person must reapply for benefits. Reinstatement of benefits would then require approximately 3 months before a check would be received. It would be wise for the disabled working person to save a small portion of his/her earnings each month in the event that the job would be lost after the 12-month adjustment in order to carry the person through this possible 3-month period of no income.

What must be done regarding S.S.I. when the disabled person is employed?

The local social security office must be notified immediately regarding this change in employment status. The easiest way of accomplishing this is to obtain a statement from the employer describing the new employee's hours of work per week and the rate of pay per week. Project Employability staff will arrange for this statement. The statement must be taken to any local social security office in order that the benefits can be reexamined in view of this information. The next monthly check should be reduced. If it is not, notify the social security office immediately to find out why the reduction did not occur. The social security office may have "overpaid" you and, if so, it will request that the overpaid amount be returned later. Therefore, be certain that the first check received after employment is reduced.

Will the handicapped person lose all S.S.I. benefits due to employment?

S.S.I. benefits are reduced according to a person's income. Handicapped persons can earn income without losing all benefits (\$65 to \$85 in earnings per month are allowed before any reduction); however, if the person holds down a full-time job at minimum wage, the benefits will probably be reduced to zero for as long as the person remains on the job. When the social security office receives the statement from the employer regarding earnings, a reviewer will figure the necessary reductions to the current S.S.I. payment. Remember, the check can be increased rapidly if the job is terminated by simply notifying the local social security office.

How does employment affect Medicaid?

As long as the new employee remains eligible for some reduced portion of S.S.I. payments, even if only a few dollars a month, the person will still receive Medicaid benefits. Thus, a person who is working full-time will probably no longer be eligible for S.S.I. or Medicaid while he/she remains on the job. However, again, both benefits can be regained if the person leaves or is terminated from the job. In addition, Project Employability only places disabled persons in jobs where they receive full medical benefits with a full-time position; therefore, the loss of Medicaid benefits while working with insurance should not alter the person's medical coverage. In fact, a good medical insurance plan gained through employment provides equal or better medical coverage for the working individual.

What are the financial benefits of employment vs. the receipt of S.S.I. benefits?

1. If full-time employment is gained, even at minimum wage, the employee's income will increase from the maximum S.S.I. benefit of \$198.40 to at least \$424.00 per month (gross salary) and full medical insurance coverage is provided.
2. If part-time employment is obtained, some portion of the S.S.I. payment will continue each month and Medicaid benefits will also continue. Therefore, the employee will receive salary and S.S.I. payments.
3. With employment, the disabled person becomes eligible for regular social security income in the future due to his/her contributions from earnings.

with a given company. Transportation is usually a problem because most severely disabled individuals cannot drive and may not be able to utilize public transportation. Thus, transportation must be worked out by the job coordinator, rehabilitation counselor, and parents. Below are listed some of the ways which we have found to work out this potential obstacle to placement:

1. Consider whether a placement is available which is close enough for client to walk.
2. Have parents take individual to work.
3. Have parents form car pool with parents of other trainees if possible.
4. Complete bus training if public transportation is available and feasible.
5. Have co-worker pick up trainee and take him home; work out equitable pay situation.
6. Investigate whether locality has a bus or van which is used to help disabled or senior citizens get around community.

Unquestionably, the transportation problem can be a major stumbling block. The job coordinator must be diligent and initially may have to participate in the actual transporting of the trainee. Once the individual is formally hired and is being paid regularly, parents and other co-workers may view him in a more credible light and therefore, make a greater commitment toward transportation assistance.

The type of home which the trainee resides in will also influence the job selection process. As Schalock and Harper (1978) have noted, the disabled individual's physical grooming, clothing care, eating and

sleeping habits, and financial resources are important variables in the competitive employment process. The individual's competency in these areas may vary depending on whether he lives in a real home, a group home, a boarding house, or residential facility. To take this factor one step further, consider a family of three. The parents are in their late sixties with a father who is physically incapacitated and a severely retarded son in his mid-thirties. Assume the son has an opportunity to work as a kitchen laborer at \$3/hour for a nearby restaurant for 40 hours a week. However, the only work shift available is 5:30 am to 2:30 pm. This may pose a real dilemma for the parents in terms of transportation and, equally important, in interrupting the normal life style in the home. These are real concerns which a job coordinator must face in placing severely disabled adults with limited work histories. These problems are best solved by patience, use of other parents to persuade skeptical families, and most importantly, assurances of initial supervision and training on the job.

Client and Parent Attitudes

As noted above, many severely developmentally disabled individuals have experienced more than one disappointment due to unkept promises made through previous programs. Therefore, the objective of job placement is frequently met with much skepticism on the part of the parent or guardian. Indeed, the client's attitude may also reflect that of the parent. The "I don't want a job" philosophy often stems from the fact that the individual has learned from his or her parents that it is not necessary to work. If this is the case, job placement personnel must provide

assurance to the entire family that the objectives and techniques of the program are sound and that the prospective employee deserves the dignity of risk (Perske, 1972). We have found several factors which may persuade reluctant families:

1. Assurance of continual daily on-the-job supervision and "inservicing" of nonhandicapped co-workers in the job setting.
2. Assurance that the trainee's placement spot in his current program will be kept open if the job placement does not work out.
3. Careful explanation of the rules and regulations governing the Supplemental Social Security Income which most severely disabled persons receive and which will be halted upon full-time employment.
4. Careful explanation of the amount of weekly wages and fringe benefits which will now be available to the individual.

After consent to job placement is gained, client and parents must be involved in the initial planning as to the location of the job, type of work required, and any special employer requirements. The location of the job may be a source of fear for families of women involved in the program. For example, we have found that parents of several women did not want their daughters to be placed in a downtown job location. If no definite assurances can be made regarding the long-term safety of the person, then certainly the parents' wishes must be viewed as realistic concerns. The trainee and the parents should be clearly informed as to the type of work and its requirements prior to placement,

e.g., crew work vs. working alone, hours, clothing required, etc. Parents should also be made aware of any changes in job responsibilities as they occur.

Frequent communication will help families remain informed and avoid potentially embarrassing incidents with the employer concerning job requirements imposed on the trainee. Even with daily communication, however, some parents may call the employer unnecessarily. As with most companies and government organizations, the employer is largely concerned that the employee is performing the job adequately; there is not usually time available to counsel worried or overprotective parents. Furthermore, this tends to cast a negative light on the trainee who may subsequently be viewed as less independent.

In short, the job coordinator, teacher, or counselor, must function not only in a training and placement capacity but must provide systematic supervision and follow-up once the placement is made. Furthermore, it is critical that the job coordinator serve as a mediator between the employer's needs, client's capabilities, and parent's wishes.

Factors Involved in Identification of an Appropriate Employer

Once relevant factors which influence the job selection process have been assessed, the selection of an appropriate employer is necessary. This includes selection of the company or organization which the job coordinator and client will apply to. It also involves how to approach employers initially and overcoming the type of misconceptions and problems which many employers have with retarded workers. Finally, an extended field training period for purposes of evaluation may be established.

Community Job Assessment

A survey of available community jobs must be initiated as the first step in locating a place of employment for the client. This may be facilitated through screening newspaper want ads for low skilled or non-skilled employment opportunities. Descriptions to look for within ads meeting the skill criteria are "Will train" or "No experience necessary." The types of jobs may vary from location to location. However, there will usually be those which fall under categories such as food service, groundskeeping, and maintenance. Although these are but a few of the types of jobs disabled individuals can perform, they have proven to be ones in which severely developmentally disabled individuals can excel (Becker, 1977).

There are other means of screening the community for jobs as well. For example, reviewing the yellow pages in local phone books may yield major contractors in target occupational categories. Personal contacts within companies or organizations which have relevant jobs should also be utilized if appropriate. The National Alliance of Business usually has a local branch which may prove helpful since they receive many job pledges from business and industry every year. Most states have an employment commission which receives a listing of job vacancies that may be appropriate as well.

We have found, as others have (Rusch, Note 1) however, that universities, colleges, hospitals, and other large institutional settings are most fruitful in terms of job placement for severely disabled individuals. This type of employer has several positive points. First, they typically have a high turnover of the types of jobs which severely disabled persons

can perform. Second, they frequently have a commitment to hire handicapped individuals. Third, the pay and benefits are frequently quite desirable. Finally, it may be most efficient to assign one teacher or job coordinator to the same job site and gradually increase the number of trainees. As a trainee becomes increasingly competent at the job, a second individual can be introduced to the employer. This process can continue until quite a few trainees have been hired.

Once several job leads have been identified, the next step is to follow-through by making the initial telephone contact. This can be facilitated by a social contact or someone already working in the company that is willing to talk to the employer before the phone call. The Director of Personnel is the logical contact person in most cases. In our experience an honest, yet optimistic, approach is best received. A brief explanation of the program in general terms should be followed by asking if the company would consider allowing a mentally retarded person to train for the advertised position or a similar one. At times, employers may have jobs which were not advertised but which may be more appropriate for the client.

A general reaction will be generated by the employer through the telephone contact. This reaction may be positive, negative, or cautiously positive. In most cases it is best to eliminate the negative employers and concentrate on the positive employers. To a certain degree, this will be influenced by the type and number of appropriate job vacancies which an employer has. With the employer who appears to be receptive, an interview date should be set as soon as possible.

Approaching the Employer

The initial personal contact is critical in terms of making a placement. It is during this stage that a full description of the program, clients' abilities, staff's training capabilities, as well as the generally positive aspects of hiring mentally retarded workers is related. This contact will also give the job coordinator an opportunity to find out what other job possibilities are available and what the prevailing sentiment is toward hiring disabled clients.

Some employers, unfortunately, have had disappointments in attempting to work with other programs for the handicapped. These disappointments may be expressed in terms of "The counselor only came the first day," or "No one else was here to teach us how to work or communicate with him," or "They came the first day with the teacher and we never heard from them again." During the initial contact, it is important to dispel these concerns and point out the differences between the present training program and others. The sincerity demonstrated during this time must be kept to establish a good future working relationship with the company or organization. It is necessary to keep in mind that interacting with businessmen is not the same as interacting with special education and rehabilitation personnel. Mentally retarded clients' capabilities must be presented in general descriptive terms concerning their abilities. Their potential benefit to the company must be presented in business terms, such as the predominantly positive track record which retarded workers have after initial supervision. If the attitude toward the program and future placements appears positive, then a trial training period may be negotiated.

Establishing a Training Period

The establishment of a training period may take place during the initial personal contact or during future contacts. It is not unlikely that several more contacts may precede the agreement on the training period. This becomes more likely with larger businesses with extensive personnel division hierarchies. Approval needs to be given from the Director of Personnel down through the immediate foreman or supervisor. The length of the training period should be based on the clients' abilities, prior training, the job surroundings and the skills involved. The training period may be viewed as extended training from the classroom or workshop and hence be nonpaid for a short period of time. On the other hand, National Association for Retarded Citizens funds may be used for on-the-job training or rehabilitation counselors may provide funds to reimburse employers. For rehabilitation funds to be utilized, however, the counselor must be convinced of the trainees employment potential. This is usually quite difficult with severely retarded individuals who have been previously excluded in most cases. The training period should be presented to the potential employer and parents as a predictor of the client's ability to perform the job accurately, and within the specified time frame.

Ideally, the immediate supervisor will agree to directly observe the trainee at certain periods of time throughout training. In this way the company will be aware of the progress which the trainee is making. Furthermore, the supervisor can advise the job coordinator in ways that the job may be completed more efficiently. The job coordinator

must keep careful objective records of the trainee's progress. These may include

1. Observations at different intervals of the day of on-task versus off-task behavior.
2. Recording at different intervals of the day of frequency and type of trainer prompts required.
3. Recording at the end of each day of the clients' general work behaviors. These include absenteeism, tardiness, appearance, and social behavior with the supervisor and co-workers.

These data should also be collected after the hiring at selected follow-up intervals. This will document to the employer the success of the trainee and pave the way for other clients.

The training period is a time when the job coordinator and supervisor can work together in helping the client (Cooper, 1977). To a large extent, the rapport between the supervisor and trainee will facilitate his hiring as well as the hiring of future trainees. The job coordinator's role in this process is twofold. One, there may be a demonstration of how to most effectively work with the trainee. The caution here is to not work with the client to the exclusion of the real supervisor; if this occurs, there may be difficulties in maintaining work performance once the job coordinator leaves. The second function of the job coordinator is to be an effective advocate for the trainee with other individuals in the environment. This may include getting media support, explaining the client's role in the work force to others in the work environment who are not informed, or simply helping the trainee get adjusted to unfamiliar work surroundings.

The Job Interview

After the training period is established, a time for an interview between supervisor, trainee and staff member must be set. The interview should take place after formal interview training has occurred. The job coordinator should only enter the interview if the trainee's interview abilities break down, as in the case of some nonverbal individuals. The following job interview skills should be stressed in preplacement training:

1. Eye contact upon introductions.
2. Good body posture when standing and sitting.
3. Firm handshake and release after appropriate time span has passed.
4. Ability to respond to small talk characteristic of an interview, i.e. "How are you?" "Have you worked before?"

Although lack of proficiency in each of these skills will not necessarily preclude placement, it will considerably enhance the trainee's chances of being hired if there is evidence of good interview behavior and neat appearance.

Conclusion

This paper has been concerned with aiding the entry of severely developmentally disabled individuals into competitive employment. It has been our experience that even the most sophisticated training technology will not lead to the severely disabled individual's employment if the factors noted above are not seriously considered.

Although not all of the points described herein will always play a role in job placement, usually some of them will, especially in com-

panies where there is a limited precedent for employment of severely disabled workers. These points represent a unique combination of behavioral training (e.g., teaching job interview skills), counseling (e.g., interacting with parents and employers), knowledge of job market (e.g., community job assessment), and inter-agency cooperation (e.g., working with NARC, NAB, or Social Security Administration). For teachers in special education classrooms, this suggests a unique challenge of training outside classroom walls; in a similar fashion, those in community-based adult programs must evaluate training models other than those which provide only sheltered employment.

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PROJECT EMPLOYABILITY OBSERVATION AND
RECORDING SYSTEM¹

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PROJECT EMPLOYABILITY OBSERVATION AND
RECORDING SYSTEM

In order to document the effectiveness and impact of Project Employability's training and placement efforts, an observation and recording system was established. This system relies on direct observation by project staff of client's job performance. Observations are then recorded immediately and graphed. The explanations of our assessment system and data sheets will serve to facilitate an understanding of several of the illustrative papers which follow in this volume.

There are several characteristics of this recording system which should be noted. First, target behaviors for observation are defined carefully so that two or more observers can agree on the occurrence or nonoccurrence of the behavior. For example, "on-task" vs "off-task" behavior must be defined according to the specific parameters of the job. That is the on-task behaviors of a groundsman will be different than those of an elevator operator. Second, because of the increasing number of clients placed it is impossible to record their behavior continuously. Therefore, we sample behavior by observing and recording during several 15 minute intervals each day. Third, an effort is made to periodically involve a second independent observer who collects data simultaneously. Data sheets are then compared and checked interval by interval for agreement. This provides an index of reliability and thereby insures the accuracy fo the performance recording system. A fourth characteristic of our system is that behavior is observed and recorded daily.

The use of an ongoing system of job performance assessment provides the advantage of empirically verifying the successful work adjustment which previously excluded clients make in competitive employment situations. Furthermore, since we often place trainees in extended (Field) training situations in competitive employment, there is a need to demonstrate trainee's work potential empirically.

There are three primary types of records which we use in job performance assessment in the field. These include:

1. Sample of Work Regularity
2. Levels of Assistance Required for Job Completion
3. Supervisor Evaluation Form filled out by Employer

Work Regularity

The assessment of work regularity involves defining the on-task versus off-task job behavior, observing and recording the client through several intervals daily, and graphing results.

Table One, presented on the following page, provides an illustrative data sheet which facilitates the recording of this information. By recording nonhandicapped workers' performance rate as well, we are able to make work comparisons between severely disabled trainees and "normal" workers.

Momentary time sampling is the measurement technique used. This form of assessment requires the observer to look at the trainee's behavior every 10th second (as an example) within a five minute interval. If the trainee is on-task a plus (+) is recorded; if not a minus (-) is recorded. A percentage of pluses and minuses is then computed.

Although the above index is of value for recording work rate over time, it fails to evaluate the amount and degree of intervention required to develop and maintain consistent work performance.

Table 1
Sample of Work Regularity
Percent Time On-Task

Trainee: _____ Job Site: _____

Evaluator: _____ Job Title: _____

Observation Period	Time Start	Time End	Per Cent of Intervals On-Task /	Percent Time On-Task	Job(s) or Activity(ies)
MONDAY Date: _____	I.				
	II.				
	III.				
	IV.				
	Daily Tot.: /			Daily Avg.:	
TUESDAY Date: _____	I.				
	II.				
	III.				
	IV.				
	Daily Tot.: /			Daily Avg.:	
WEDNESDAY Date: _____	I.				
	II.				
	III.				
	IV.				
	Daily Tot.: /			Daily Avg.:	
THURSDAY Date: _____	I.				
	II.				
	III.				
	IV.				
	Daily Tot.: /			Daily Avg.:	
FRIDAY Date: _____	I.				
	II.				
	III.				
	IV.				
	Daily Tot.: /			Daily Avg.:	
WEEK END	WEEKLY TOTALS: /			WEEKLY AVERAGE:	

Definitions:

On-Task: _____

Off-Task: _____

Therefore, we have implemented an observation and recording system which allows for coding which forms of assistance are necessary to help the trainee complete a job. These levels of assistance include:

1. Verbal cue only Example: "John, don't forget to clean the ashtray too"
2. Verbal cue plus gesture Example: "John, don't forget to clean the ashtray over there" - Trainer gestures to ashtray.
3. Verbal cue plus model Example: "John, clean the ashtray like this" - Trainer demonstrates how to clean ashtray.
4. Verbal cue plus physical prompt Example: "John clean the ashtray" - Trainer physically assists John through task.

As this hierarchy also provides the sequence of instruction which project staff utilize in training, these data provide important feedback as to the effectiveness of trainer intervention. Typically, when a client is initially placed there is a higher amount and greater degree of trainer assistance required to facilitate the adjustment. These prompts generally diminish as the trainer gradually reduces his/her physical proximity and subsequent cueing.

Table Two indicates the data sheet we use to record level of assistance assessment. Four, ten minute prompt samples are recorded per day.

Supervisor Evaluation

The supervisor evaluation which follows in Table Three is a routine yet surprising sensitive predictor of client performance and job future. This form of evaluation also provides feedback as to the perceived relationship which the employer has of project staff and the program. This is a particularly good indicator for evaluating when the employer feels a client is ready to leave the extended training phase and be officially hired.

Table 2
LEVELS OF ASSISTANCE REQUIRED FOR JOB COMPLETION AND PROFICIENCY

Trainee: _____

Job Site: _____

Trainer: _____

Job Title: _____

Indicate the # of Prompts used and Physical Proximity from the trainee by placing the appropriate Distance Code under the correct Prompt column each time a prompt is used.

Distance Code
A = Trainer Within 3 Ft. (Arms reach)
B = Trainer 4 to 10 Ft. away
C = Trainer over 10 Ft. away

Observation Interval	Date	Time Start/End	Verbal Cue Only	Verbal Cue and Gesture	Verbal Cue and Model	Verbal Cue and Physical Prompt	No Prompt Given
I							
Specific Problem Area(s) -->							
II							
Specific Problem Area(s) -->							
III							
Specific Problem Area(s) -->							
IV							
Specific Problem Area(s) -->							
I							
Specific Problem Area(s) -->							
II							
Specific Problem Area(s) -->							
III							
Specific Problem Area(s) -->							
IV							
Specific Problem Area(s) -->							
I							
Specific Problem Area(s) -->							
II							
Specific Problem Area(s) -->							
III							
Specific Problem Area(s) -->							
IV							
Specific Problem Area(s) -->							
Daily Totals:							

Table 3
SUPERVISOR'S EVALUATION FORM

TRAINEE/EMPLOYEE'S NAME: _____
JOB TITLE: _____
JOB SITE: _____
JOB COORDINATOR: _____

DATE OF PLACEMENT: _____
DATE HIRED: _____
CURRENT DATE: _____

PLEASE CIRCLE ALL ITEMS WHICH APPLY TO THE TRAINEE/EMPLOYEE:

1. The employee (a) generally arrives and leaves on time
(b) maintains good attendance
(c) takes meals and breaks appropriately
(d) maintains a good appearance
Comments on un-circled items: _____

2. The employee has: (a) mastered all aspects of present job
(b) mastered many but not all aspects of job
(c) not mastered essential aspects of job to date
3. In order for the employee to follow directions regarding the job, the supervisor: (a) can just give verbal instructions
(b) has to give many gestures as well as verbal instructions
(c) has to show the employee exactly what to do before he/she knows what to do
4. Project Employability staff is present: (a) too often
(b) too little according to the employee's needs
(c) an appropriate amount of time
5. This employee: (a) frequently stops work and needs to be reminded to return to work
(b) stops working occasionally but no more than other employees
(c) works at a constant rate without reminders
6. The employee is: (a) a good worker
(b) an average worker
(c) a below average worker
7. Does the Project staff in any way interfere with your supervision or plans for the employee? (a) no (b) yes (if yes, please briefly describe)

Other comments: _____

Related Types of Evaluation

Although the above assessments are useful in evaluation of client job performance there are also three other modes of data collection which are used. These involve: (1) Assessment of the level and frequency of social interactions between severely disabled workers which we have placed and non-disabled workers in the same work area (Table 1).

- (2) A cumulative record of wages earned and absenteeism rate (Table 5).
- (3) Performance of severely disabled workers in the Industrial Unit (sheltered work) whose terminal placement will probably be a sheltered workshop. (Table 6).

Each of these forms follows.

Summary

We are working continually to upgrade the quality of our system of client evaluation. Furthermore, we are conducting several "mini-investigations" which allow for verification of the reliability and validity of our recording system. For example, we are presently attempting to identify whether there are significant on-task differences when clients are aware that their behavior is being observed and recorded. If this is true, as it may appear, then adjustments will have to be made.

It should be clear, however, that making systematic observations in hectic traditional work environments such as large college cafeterias is very difficult. It is awkward to maintain a clipboard and stopwatch; being unobtrusive in such an environment is quite a challenge.

Yet we must continue to devise means of ongoing assessments because it is apparent that traditional tests will not even allow many severely disabled clients into the system for evaluation let alone job placement. An observation and

Name: _____

Table 4

Interactions Between Handicapped Workers
And Non-Handicapped Individuals in Competitive Employment

Interaction Initiated By	Emphasis of Interaction	Proximity	Type of Interaction
A - Handicapped Worker	A - Instruction	A - Physical	A - Verbal
B - Non-Handicapped Co-Worker	B - Social (Work-Related)	Contact	B - Gesture
C - Other Non-Handicapped Individual	C - Social (Non-Work-Related)	B - Within 4'	C - Model
D - Supervisor	D - Harrassment	C - 4'-10'	D - Physical
		D - Over 10'	

Date: _____														
Time: _____														
Interaction Initiated By (Talley Number of Interactions Here)	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Emphasis of Interaction	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Proximity	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Type of Interaction	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0

Date: _____														
Time: _____														
Interactio Initiated By (Talley Number of Interactions Here)	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Emphasis of Interaction	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Proximity	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0
Type of Interaction	A	0	0	0	0	0	0	0	0	0	0	0	0	0
	B	0	0	0	0	0	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
	D	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5
MONTHLY FINANCIAL SUMMARY

Job Coordinator: _____

Job Site: _____

[illegible]

Table 6

NAME _____

MONTH _____

TASK _____

STANDARD _____

[illegible]
$$\frac{\text{AMOUNT COMPLETED}}{\text{AMOUNT OF TIME}} = \text{RATE}$$

recording system which provides for direct and continual assessments over time is the best way of tracking the performance of severely disabled clients.

DEVELOPMENT OF A DATA-BASED PRE-EMPLOYMENT
TRAINING PROGRAM FOR MODERATELY TO SEVERELY
RETARDED ADULTS

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Development of a Data-Based Pre-employment
Training Program for Moderately to Severely Retarded Adults

The implementation of a job placement and training program through Project Employability clearly pointed out the need for a refinement of the placement services available within activity center-type programs for mentally retarded adults in the Richmond Area. Indeed, one major focus of the grant project was to assist a local program in the development of model vocational services which would truly prepare an individual for sheltered and/or competitive employment. It was agreed by agencies that a major weakness of such programs was a lack of appropriate training content which simulated job types or the job market, available, within the community. Even a cursory assessment of this job market shows frequent openings in food service, janitorial, or general utility type jobs. Therefore, it was established that instead of solely providing sheltered workshop type programming or an arts and crafts emphasis, a systematic structure for teaching food service, janitorial and utility-type jobs had to be developed and be manageable within a typical adult service program. Thus, from the Project's job placement experience it was stressed that moving a trainee from a sit-down workshop environment, and placing him directly within a mobile, multifaceted-type job could no longer be justified. Practice and pre-training in job types and the non-vocational social skills required for a job had to be provided.

Project Employability, in a cooperative effort with the staff and support services of the Henrico Adult Services Center, thus, developed the structure which now exists within the Center. Table I shows the continuum

of services available within the structure. These three component parts of the program are discussed below.

Insert Table I About Here

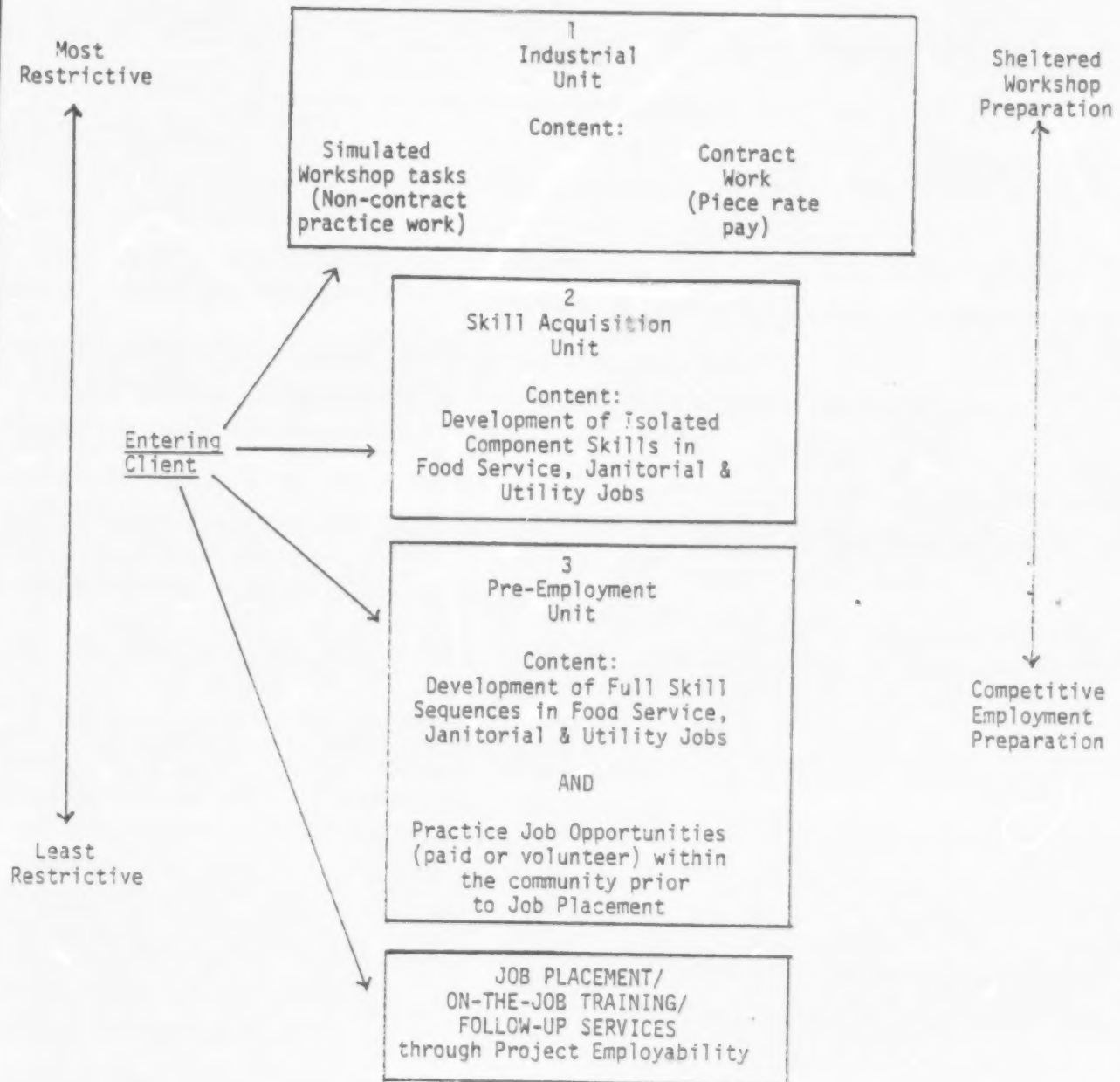
Industrial Unit

Ten to 14 clients were selected for this unit based on evidence that competitive employment was not a short-term goal and that sheltered employment was currently the least restrictive alternative. The physical structure of the unit, the job-types, and the daily schedule were all designed to closely simulate that of local sheltered workshops. There are several programs which demonstrate our efforts in this area later in this volume.

Staffing Pattern. Two regular instructors were assigned to this unit and two to four VCU student interns or practicum student were available during all work periods.

Objective. The objective of this unit is prepare clients for sheltered workshop entry or to enable them to earn piece-rate wages on contract work within this program. More specifically, clients were assisted in development of production rates and independent work skills expected of employees at local workshops. Eventually we expect these individuals to be placed on local counselor caseloads.

Table I
Continuum of Services Available within
Center-Based Program



Job Types. Five jobs were selected based on their use in sheltered workshops in the State of Virginia. Raw materials were obtained from sheltered workshops to simulate the tasks exactly or if materials were unavailable, a close facsimile of the job was produced. The job types included:

- 1) Ball Point Pen assembly
- 2) Jump Rope assembly
- 3) Photo Flyer assembly
- 4) Defective Circuit Breaker Piece Sorting; and
- 5) Boiler Drain assembly.

The Center staff is currently in the process of securing sub-contract work from which clients can earn piece rate wages.

A Data-Based Focus. The industrial unit included a continuous monitoring system (i.e., daily data collection) of each client's production rate. In addition, reinforcement schedules and other techniques are used to accelerate production rates on a daily basis. Section II provides studies used to evaluate the reinforcement techniques among individual clients.

Work Related Training Areas. Each client within this unit also receives training in the following areas:

- 1) Self-Examination of Grooming
- 2) Critical Communication Skills
- 3) Functional Social Skills
- 4) Leisure Skills Training (during breaks)

A weight reduction program and an accompanying exercise program is also being developed for clients needing this type of programming.

Skill Acquisition Unit

Five clients were selected for placement within this unit based upon potential for future employment. Employment potential was determined through assessment of physical abilities and the demonstration of appropriate work skill: within the Industrial unit (i.e., works independently for 50 to 90 min.; acquisition of a variety of job types; self-initiation of jobs, etc.). This group moved throughout the Center during the work day according to the job types being instructed.

Staffing Pattern. One instructor was assigned to this unit. Periodically, Project staff would also work with this group.

Objective. The purpose of this unit is to prepare clients for entry into the Pre-Employment Unit by insuring the acquisition the basic tasks involved in Food Service, Janitorial, and Utility-type jobs. These basic tasks are delineated below and, in essence, the acquisition of these tasks make up the entry level skills for the Pre-Employment Unit.

Core job tasks:

1. Sanitizing tables and chairs (plus rearranging items on table).
2. Clear tables (of trays, paper, plates, etc.). Wipe down.
3. Breaking down trays (sorting paper, silver, cups, plates).
4. Cleaning ash trays.
5. Sweeping specified area.
6. Industrial mopping (specified area).
7. Wash dishes.

8. Scrub pots.
9. Clean sinks.
10. Clean toilets.
11. Clean windows, mirrors.
12. Wipe down equipment (Looking Busy Skills).
13. Collect and empty trash.

Home living skills -- (Instructor's choice based on client needs)

A Data-Based Focus. A daily recording system utilizing a task analytic approach monitored client progress toward acquisition of the core job tasks. Clients had to meet a specific criterion before acquisition was documented on an individual task and all tasks listed above had to be acquired for upward mobility to the Pre-Employment group. Clients were reinforced through the use of a point system. Points could be exchanged for free time, money or Friday afternoon outings. Figure I shows examples of skill acquisition for a client in this unit exhibited on two different skills.

- - - - -
Insert Figure I About Here
- - - - -

Work Related Training Areas. Each client also received training in the following areas:

1. Self-examination of grooming.
2. Critical Communication Skills

BOB-

CLEANING WINDOWS

MOPPING FLOOR

SPEED UP
PHASE
COMPLETE
IN 20 MIN.

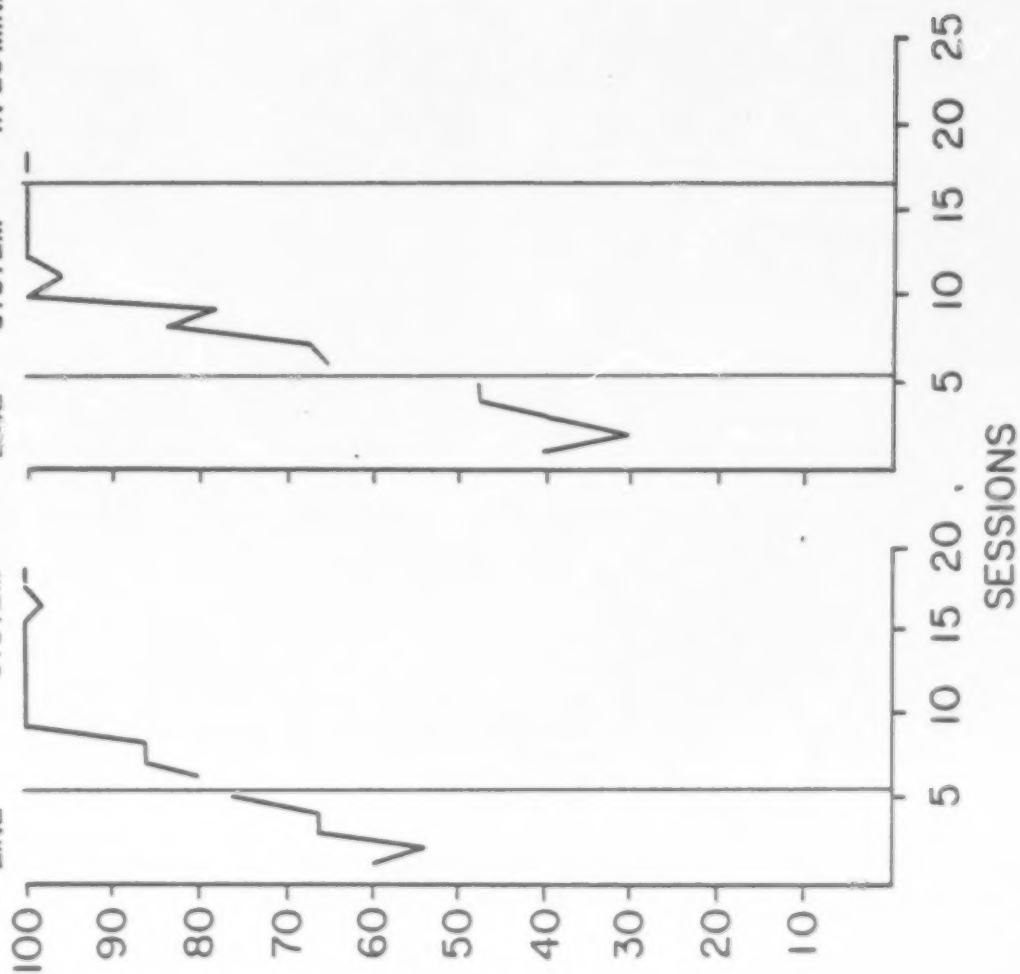
INSTRUCTION
PLUS POINT
SYSTEM

INSTRUCTION
PLUS POINT
SYSTEM

BASE
LINE

BASE
LINE

% OF STEPS COMPLETED INDEPENDENTLY



3. Functional Social Skills

4. Job Attitude and Job Survival Skills

Pre-Employment Unit

Five to six persons were selected for this group based upon data which indicates acquisition of the basic, isolated tasks within the Skill Acquisition Unit. This unit was located in a simulated Dining Hall area, with a large kitchen and two bathrooms located on either side of the Dining area. The entire area was made to resemble a cafeteria operation. For example, within the kitchen a simulated dish room window was set up with an industrial cup holder, silverware separator and restaurant bus pans. Dining room tables held salt and pepper shakers, ash trays and a stand-up information flyer. Before each work period, the instructor sufficiently "messed-up" each work area to simulate a dirty cafeteria. Papers and dirt were spread on floors, dishes were left on tables, mirrors were smeared, and pots were made dirty with grease.

This group also traveled to luncheons or contact clean-up jobs in the community as an intermediate step on their job preparation before actual placement on a job. These pre-placement job experiences are described below.

Staffing Pattern. One instructor was assigned to this group and one Project Assistant was available for approximately two hours a day.

Objective. The objective of this unit is prepare clients for actual job

placement in food services, janitorial or utility-type jobs in the community.

Toward that goal three specific objectives had to be met:

1. The client self-initiated each component part in the sequence of basic tasks which make up each of the four job categories described below.
2. The client completed each job category correctly with no more than two prompts from the instructor during a work sample; and
3. The client exhibited defined on-task behavior 90% of the time during work periods for 20 consecutive days.

Job Categories

The four job categories are shown in Table II and the component, basic tasks involved in each are also given.

 Insert Table II About Here

At the beginning of a 45 minute to one hour work period, the client checked the roster to determine which job category he or she was assigned for that period. If the client could not read, the job was depicted by a small illustration card. Figure 2 shows examples of these job cards. It was agreed that the use of such cards was a technique which would lead to greater independence in self-initiating a job rather than the use of verbal directions

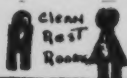
Table II

Core Job Categories for Pre-Employment Unit

<u>Categories</u>	<u>Basic Tasks Involved</u>
1) Busing Dining Hall	a) Clear tables of trays, paper plates, cups, etc. and wipe down; b) Break Down trays; c) Clean Ash trays; d) Sanitize tables, chairs; e) Rearrange chairs and items on tables; f) Sweeping.
2) Scrubbing Pots/Washing Dishes/Prepare Items for Dish Machine.	a) Prepare pots, dishes and sinks for wash; b) Wash dishes; c) Scrub Pots; d) Clean sinks; e) Put items away.
3. Clean Floors/Wipe down Equipment (i.e., Look Busy).	a) Sweep specified area; b) Prepare cleaning solution; c) Industrial mopping; d) Put items away; e) Look Busy by wiping down equipment.
4. Cleaning Rest Rooms	a) Clean sinks; b) Clean toilets; c) Clean mirrors; d) Sweep; e) Mop; f) Empty trash

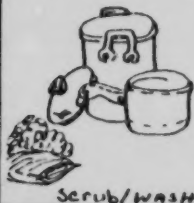
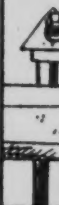
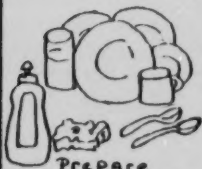
Scrub Pots/
Wash Dishes

Monday



Monday

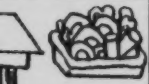
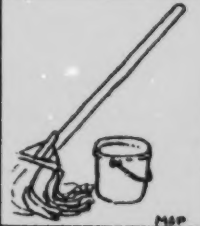
B
D



scrubbing
Pots



845

Using Dining Table	Monday	Clean Floors	Monday
  Clear table		 Sweep	
 Sanitize		 Mop	
		 Put away	
		 Look Busy	
Clear Tables		Clean Floors	

from the instructor at the on-set of each work period. Clients self-recorded their completion of the component tasks on the job card and the instructor checked the accuracy of their recording. Data from this source supplied information as to the client's performance toward objective number one stated above (i.e., self-initiation of component tasks in the job sequence).

 Insert Figure 2 About Here

During three out of four work periods, the instructor collected two types of data regarding each client's work for a 15 minute sampling period. First, for a 10 minute period the instructor simply observed the client's work and withheld prompts as long as possible. However, if a prompt was required it was recorded and the type of prompt was defined. Prompts were required for the following reasons: a) If the client took too much time to complete the task; b) If he/she did not complete it properly or forgot some part; c) If he/she did not initiate the next component or task in a job sequence. Data from this source, gave client progress information toward objective number two (i.e., requiring no more than two prompts per work period). The instructor, then, collected momentary time sampling data on On and Off-task behavior every 10 seconds for a 5 minute period. On and Off-task behaviors were defined for each job category and at the end of a 10 second period, the instructor assessed whether the client was on or off-task. Figure 3 and 4 show graphs of both types of data on two different job categories for one client. These two types of data collection are identical to the collection techniques used by the Project in training for competitive employment in actual job placements.

Insert Figures 3 & 4 About Here

Work-Related Skills. Clients were instructed in the following work related areas some of which are described in detail in Section III.

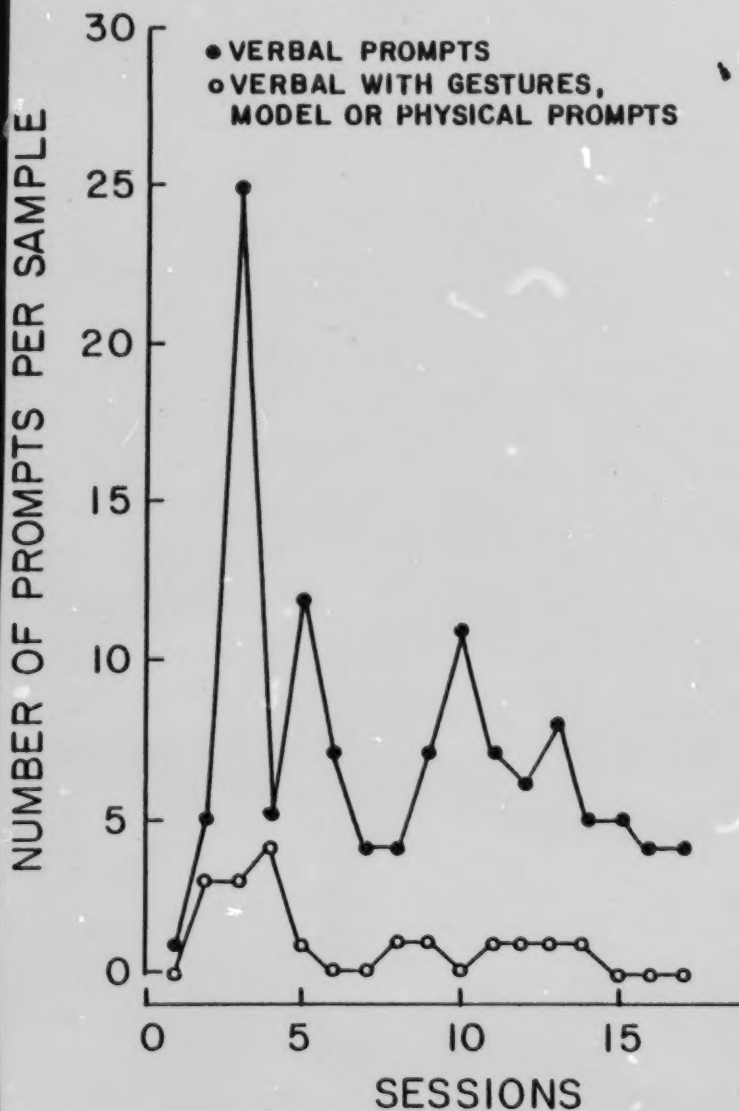
1. Job Interview Skills
2. Critical Communication Skills
3. Social Skills for Work
4. Job Survival Skills

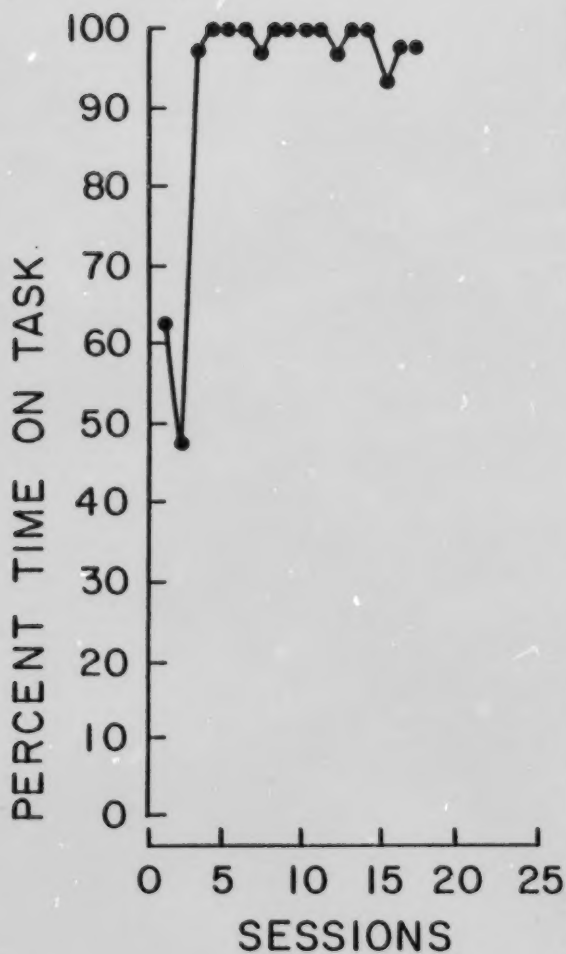
Pre-Placement Job Experiences. As task criterions within the center-based training were reached, clients were given the opportunity to practice their work skills at regular job sites in the neighboring community. Some experiences were paid and some were volunteer-type; however, in each the clients were placed in a situation where normal job expectations were required of them and they were exposed to a more normalized environment for part of their work day.

Pre-placement job opportunities which became available were the following:

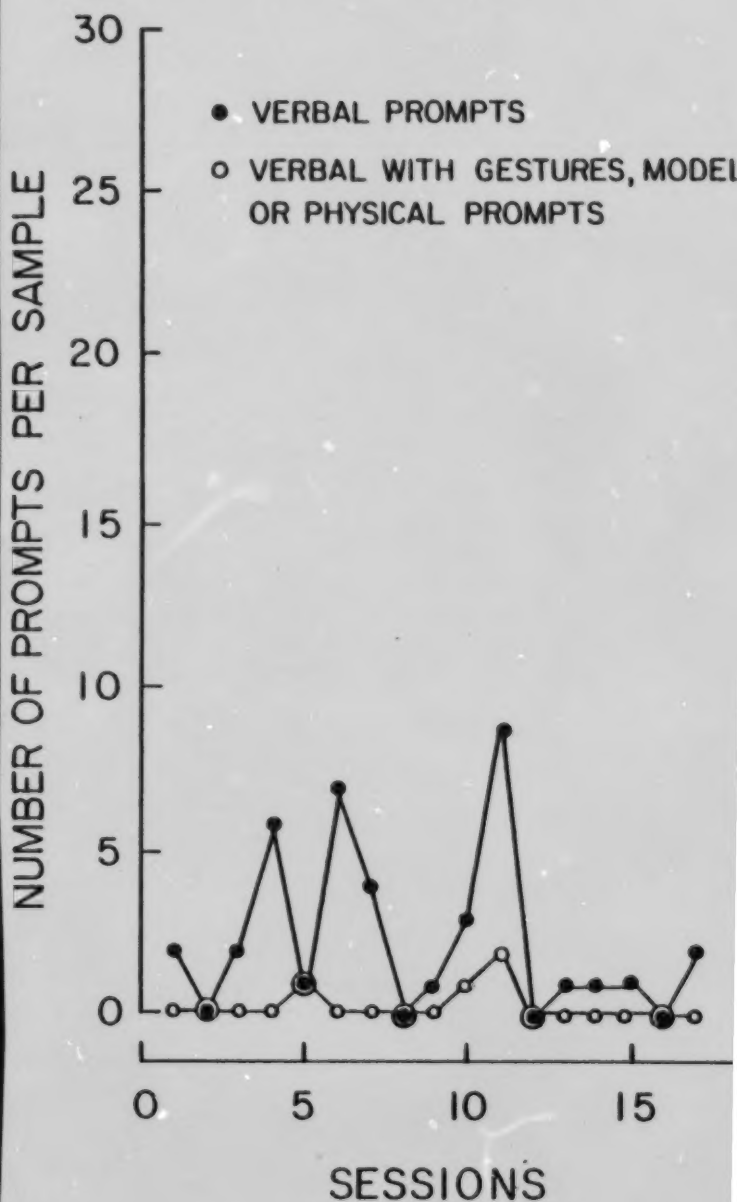
- Volunteer serving and clean-up at local church luncheons.
- Volunteer service at a free-lunch program for the elderly.
- Paid contract work for a small custodial business in window washing and apartment complex clean-up.
- Volunteer service at fast-food restaurants in Busing Tables.

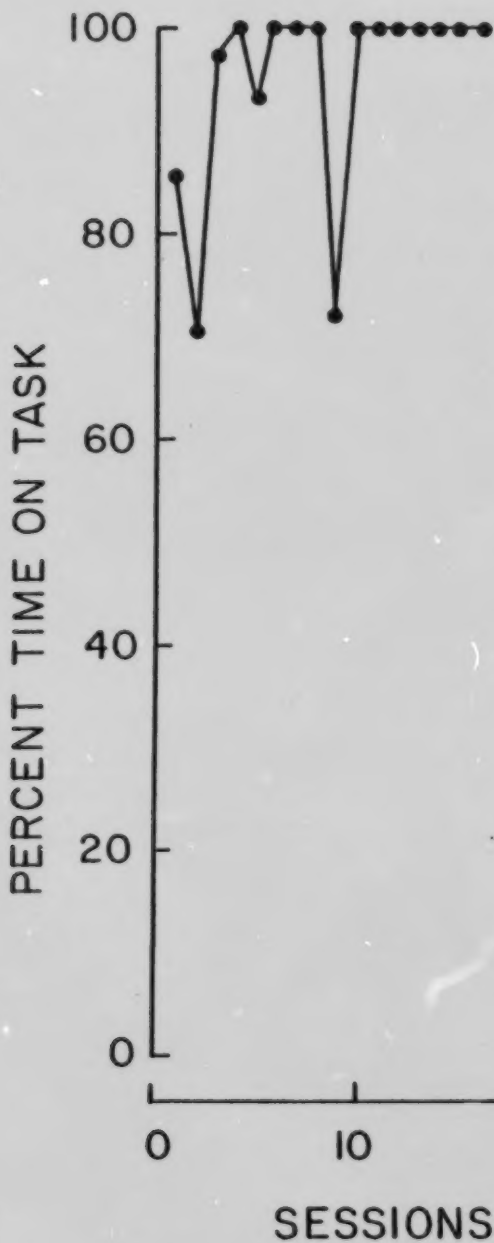
RON - BUSING DINING HALL





RON - CLEANING FLOORS





Conclusion

One method of examining the quality of this program will be to follow the progress of the clients toward the least restrictive employment alternative for each individual over an extended period. Although five Center clients have been placed in competitive employment within the four month period in which the Project and the Center have joined cooperatively, the true efficacy of the program must be examined in a longitudinal sense. That is, over the next two years we will determine the number of clients placed in competitive and/or sheltered employment and the rates of recidivism or success in the world of work as one standard through which we may judge the quality of our program.

PLACEMENT OF SEVERELY DEVELOPMENTALLY DISABLED
INDIVIDUALS INTO COMPETITIVE EMPLOYMENT: THREE CASE STUDIES^{1,2}

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¹The development and dissemination of this paper was partially supported by an Innovation and Expansion grant from Virginia Department of Rehabilitative Services.

²We deeply appreciate the administrative support of Mr. Tom Feamster and Mr. Ron Inlow in this work. Grateful acknowledgement is also extended to J. Pentecost, E. Apter, and J. Keller for their role in data collection.

PLACEMENT OF SEVERELY DEVELOPMENTALLY DISABLED
INDIVIDUALS INTO COMPETITIVE EMPLOYMENT: THREE CASE STUDIES

Vocational training programs for moderately, severely, and profoundly handicapped individuals have been designed primarily with sheltered employment in mind. There have been excellent demonstrations of severely handicapped workers' vocational potential on manual assembly tasks in state institutions (Gold, 1976; Karan, Wehman, Renzaglia & Schutz, 1976), sheltered workshops (Bellamy, 1976), and work activity centers. The type of vocational training available in these programs is contract work, sub-contract work, or "make-work" tasks. The former two arrangements lead to piece rate pay usually with minimal fringe benefits and little contact with nonhandicapped workers.

Although sheltered employment is frequently a desirable and appropriate work placement for severely developmentally disabled individuals, for many others, competitive employment in less restrictive job settings is more appropriate. To date, however, there have been relatively few demonstrations of this reported in the literature. The food service training programs for developmentally disabled persons at the University of Washington and University of Illinois are notable exceptions (Rusch, 1978, Note 1). These programs involved direct on-the-job training in the university food service and eventual placement.

The purpose of this paper is to briefly describe Project Employability, a job training and placement program which was recently initiated with Virginia Department of Rehabilitative Service funds. Following a discussion of the service delivery model, three case studies are described which illustrate the job placement process.

Program Description

Project Employability was developed in order to demonstrate the employment potential of severely disabled clients who have been considered by many rehabilitation counselors too handicapped for successful job placement. The project design involves a project coordinator, three job coordinators and several project assistants. Each job coordinator is responsible for a given field site in the greater Richmond area. Job coordinators place clients, supervise the work adjustment and training process, counsel with parents, and facilitate the client-employer relationship. The pool of severely disabled clients is primarily moderately to severely retarded adults drawn from two Adult Activity Centers and selected referrals from local rehabilitation counselors who request assistance with severely disabled clients.

The primary focus of our work is to prepare clients for vocational placement and to evaluate the processes involved in successful versus non-successful job placement for a severely handicapped population, especially as it relates to competitive employment. In order to do this effectively we have identified companies or institutions willing to hire handicapped adults and that would allow for our staff to be present regularly. The presence of staff daily on the site and continuous data collection on client progress are two important features of this project.

To date we have had increasing amounts of success and have found that ideal job sites seem to be in large institution types of placements (Wehman, Hill & Koehler, 1978). The three case studies described below are representative of the placements which have been made by project staff. We have selected clients for case study presentation with different ages, varying behavioral and physical characteristics, and different jobs.

Case Study I - Food Service Placement

Behavioral Characteristics. Chuck¹ is a 22 year old male with a measured intelligence quotient of 27. He has been classified as severely mentally retarded. Chuck is nonverbal yet follows one-step instructions and exhibits most self-care skills independently. His social behavior is outgoing and friendly, but he has no reading or computational skills. Chuck is also free of any physical or sensory impairments and lives with his family. Table 1 provides an excerpt from a recent rehabilitation evaluation of his work potential. This evaluation was completed by a licensed psychologist.

- - - - -
Insert Table 1 about here
- - - - -

Previous Vocational Training History. Chuck was attending an Adult Activity Center when Project Employability staff began to work with him. His previous vocational training involved a limited amount of domestic skill instruction when he attended public school. Chuck had never worked for wages, either in sheltered or competitive employment.

Job Requirements and Setting. The job identified for Chuck was a kitchen utility position in the student union at a small university near Chuck's home. Requirements for this job included cleaning tables, sanitizing trays, emptying ashtrays, and other related clean-up work. The hours were from 9 am to 3:30 pm Monday through Friday. Chuck was expected to function independently since his supervisor was in and out of the area all day.

¹All names used in the case studies are fictitious.

Table 1

Excerpt of Rehabilitation Report on Chuck

Chuck is a small mongoloid white man, who looks much younger than 21. He is mostly without speech though it is possible to understand an occasional word in his usual monosyllabic utterances. He is pleasant, smiling and cooperative, a little given to perseverative and ritualistic behavior.

Measure of intellectual function derived from the FRPV forms A and B yield IQ scores of 27 and 30 respectively. This is in complete accord with the findings of the school psychologist in 1973. He is in the lower end of the trainable M.R. range - severely retarded.

Chuck is good natured, friendly and willing but realistically unemployable. He can under close supervision do things like simple household chores, leaf raking and he will enjoy it but he is not really employable. Under sheltered workshop condition he may be able to sweep or do some other repetitive perseverative operation.

Test results discover a great deal of organic difficulty, one of the prime results of which is his perseveration. He will, once he starts doing a thing, do it over and over and over until stopped.

I am sorry I cannot give a more optimistic report. Chuck is a very likeable fellow.

The student union was most crowded during lunch hours. There were a number of college students and professors that regularly visited the student union.

Job Training. Chuck was hired for the job after an initial round of discussions between Project Employability staff and supervisors of food service at the university (See Wehman, Hill & Koehler, 1978 for more information on this process). Previous to his interview he had undergone a food service training program in the Activity Center. This program indicated he could perform the skills required for the job designated for him. The role of project staff was that of advocacy and training. The basic training model which was utilized involved a verbal prompt to Chuck if he was off-task or performing a job incorrectly. An example of a verbal prompt would be: "Chuck, you forgot to empty the ashtray." If this was not effective then the verbal cue was repeated and a gesture provided. If this was still ineffective, then the trainer physically prompted Chuck. As Chuck became increasingly independent, the trainer moved further away and eventually out of his line of vision. Efforts were made to involve the real supervisor in working with Chuck although project staff were readily available to help Chuck interact with nonhandicapped individuals initially. We found this advocacy to be a positive factor in Chuck's success.

Client Evaluation Data. Several sources of data were collected to evaluate Chuck's progress on the job. These are listed below:

1. Absences and tardiness. Chuck has missed 0 days and has not been late in a total of 37 possible days of work.
2. Percent of work time on-task. By collecting daily four five-minute observations (e.g., momentary time sampling) of Chuck's work

behavior, we were able to document his overall work rate as being consistently over 85% of the observations. Figure 1 depicts his work rate. This rate was computed by looking at Chuck's work behavior every 10th second in five minute intervals and recording his on or off task behavior. On-task was defined as: "Cleaning tables, returning trays to dishroom, walking to dirty tables, and cleaning counter area." Off-task was defined as: "Looking out windows, standing still behind columns, walking away from work area."

3. Frequency of Trainer Prompts. Figure 1 also indicates the level of verbal, gestural, and physical prompts which project staff had to provide Chuck. These data were collected in four ten-minute observations, and indicate that on the average less than three prompts per day were required. Unfortunately, this data system was implemented after Chuck had been working for several weeks. Hence his initial need for trainer assistance is not accurately portrayed. Reliability for this was computed by dividing the total number of agreements by the total number of observations. The total reliability was .92 percent.
4. Supervisor Evaluations. The most recent supervisor evaluation is reported in Table 2. Supervisor evaluations were collected bi-monthly.

 Insert Figure 1 here and
 Table 2 here

5. Total Wages Earned. Since beginning work on October 23rd Chuck has earned a total of \$757.30 over 37 days of paid work. (This is computed at a wage of \$2.65/hour.) He is also receiving full fringe benefits as well.

CHUCK - KITCHEN UTILITY

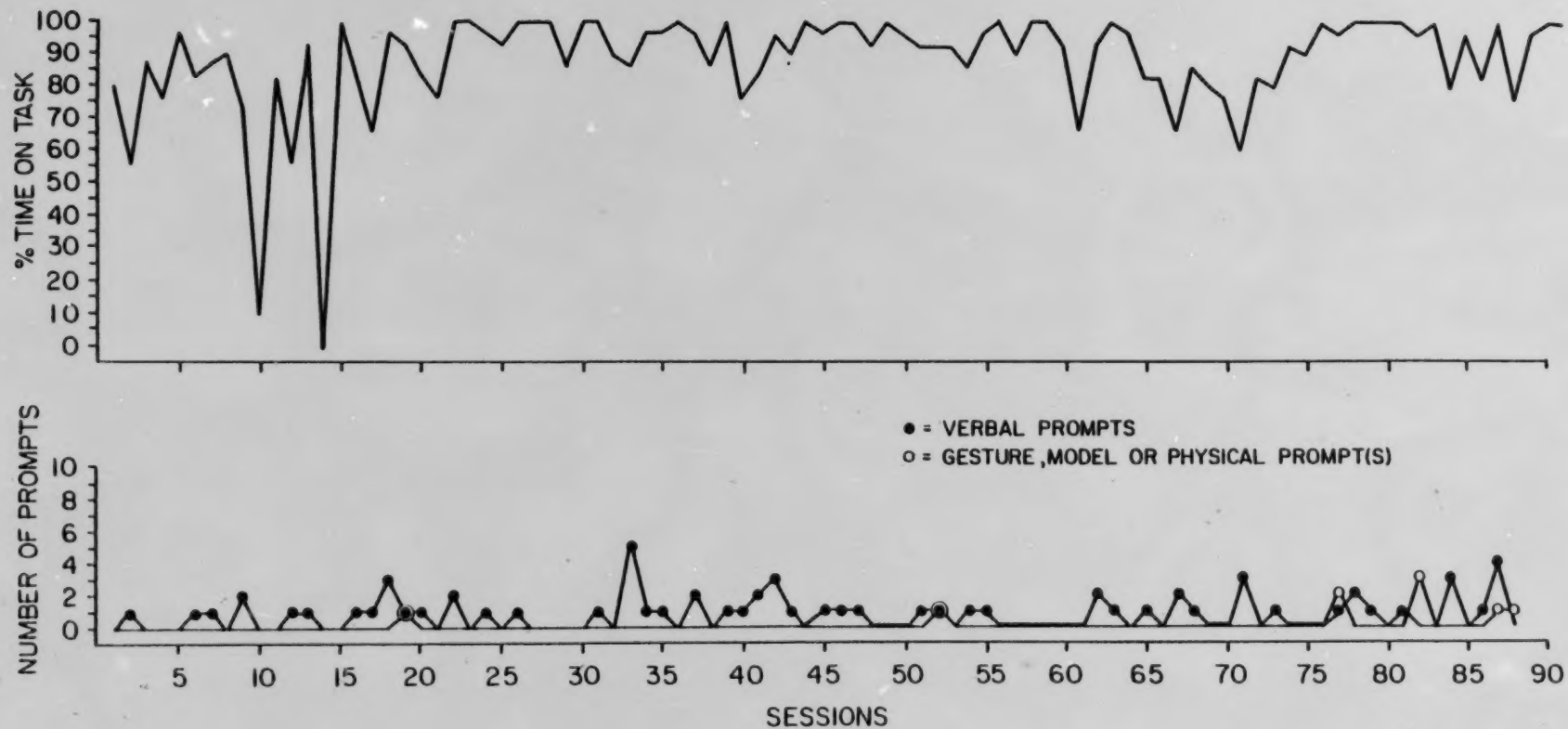


Table 2

SUPERVISOR'S EVALUATION FORM - BIMONTHLY

TRAINEE/EMPLOYEE'S NAME "Chuck" DATE OF PLACEMENT 9-25-76
 JOB TITLE Kitchen Helper DATE HIRED 12-25-76
 JOB SITE _____ CURRENT DATE _____
 JOB COORDINATOR _____

PLEASE CIRCLE ALL ITEMS WHICH APPLY TO THE TRAINEE/EMPLOYEE:

1. The employee ☒ a) generally arrives and leaves on time
☒ b) maintains good attendance
☒ c) takes meals and breaks appropriately
☒ d) maintains a good appearance
 Comments on un-circled items: _____
2. The employee has ☒ a) mastered all aspects of present job
☒ b) mastered many but not all aspects of job
☒ c) not mastered essential aspects of job to date
Filling out safety outline
3. In order for the employee to follow directions regarding the job, the supervisor ☒ a) can just give verbal instructions
☒ b) has to give many gestures as well as verbal instructions
☒ c) has to show the employee exactly what to do before he/she knows what to do
4. Project Employability staff is present
☒ a) too often
☒ b) too little according to the employee's needs
☒ c) an appropriate amount of time
5. This employee ☒ a) frequently stops work and needs to be reminded to return to work
☒ b) works at a constant rate without reminders
☒ c) stops working occasionally but no more than other employees
6. The employee is ☒ a) a good worker
☒ b) an average worker
☒ c) a below average worker
7. Does the Project staff in any way interfere with your supervision or plans for the employee? ☒ a) no ☒ b) yes (if yes, please briefly describe)

Other comments: Chucks supervisor has no need to be keeping his position

SUPERVISOR J. D.

Case Study II - Elevator Operator Placement

Behavioral Characteristics. Eric is an 18 year old male with cerebral palsy (spastic quadraplegia). He has a good vocabulary but a severe speech impairment. He is classified as a borderline slow learner; however, due to motor and speech impairments, Eric is viewed as severely disabled by state rehabilitation standards. Table 3 provides other pertinent evaluation data from the Department of Rehabilitative Services. Unlike Chuck, Eric was already on a rehabilitation counselor caseload but was about to be closed out because of the difficulty in finding a job for him. He was referred to Project Employability.

Insert Table 3 about here

Eric is an attractive young man who expressed the desire to work with people in a service-related job rather than in a production type job. Although Eric is ambulatory, his physician had previously recommended a sit-down type job in that Eric's gait is unsteady and mobility is limited by permanent contractures in the knee and ankle joints.

Previous Vocational Training. Eric had received no formal vocational training in the past and the state rehabilitation evaluator had recommended sheltered work adjustment. Eric had previously volunteered at a camp for handicapped people and at his school for the children's swimming period. Upon referral, Eric was enrolled at the local Cerebral Palsy Center in an ungraded program of functional academics. He had received his certification of completion a year before; however, due to his age and the lack of an advanced placement site, he intended to continue in the program until the age of 21.

Table 3

Excerpt from Rehabilitation Report for Eric

REASON FOR REFERRAL

Eric was originally referred for Rehabilitation services through the resources of the Cerebral Palsy Center. An analysis of his health indicates that Eric is a CP victim and that this has caused spastic quadriplegia and speech impairment. It has been suggested that Eric could benefit from Rehabilitation services and with this in mind he was referred for vocational evaluation in March of 1976. At that time the examiner felt that competitive employment was not likely but recommended further evaluation in approximately one year to determine the extent of any improvement. Current evaluation is being undertaken to ascertain whether or not that improvement occurred.

DISCUSSION

At the time of Eric's last evaluation, he was characterized as being out of reach of competitive employment. At that time, it was suggested that he be re-evaluated because of his age and the possibility of further improvement.

Eric's teacher expressed concern for his future in that like so many other graduates, job placements are few for a person with two or more handicaps. As many special programmers across the country are realizing, "...It is not that public schools cease caring once students reach 18 or so; rather most school counseling programs are neither staffed nor structured to help those with severe and multiple handicaps..." (Cooper, 1977, p. 66).

Job Requirements and Setting. The employer indicated during initial contacts that he had previous experience with cerebral palsied people but expressed some apprehension in the placement of a mentally retarded person. Therefore, although it has been shown that employers tend to view C.P. as a more severe disability than mental retardation (Byrd et al, 1977), it was apparent that in this particular placement a person with cerebral palsy could be selected.

The job match for Eric was a freight and passenger elevator operator in a large downtown hospital. A part-time position was offered on the evening shift. This was to be extended to full-time later if Eric proved himself a good employee.

An elevator operator must push reverse (i.e., up or down) buttons as well as the start button and correct floor buttons for each transport. Eric had to develop clear elevator language such as "going up" at the appropriate time. He had to refuse to permit passengers on the vehicle when freight was aboard or when he was waiting for a freight transport. Perhaps, most importantly, he had to learn what to do when the elevator was stuck between floors or when medical personnel stated that a patient

emergency existed. In addition, he had to occupy his time during slack periods and be ready to perform on call.

Job Training. A major part of our job training included advocacy for Eric. Due to speech and physical impairments he appeared far more handicapped than he functioned. The presence of project staff on a regular basis helped to develop an understanding of Eric's abilities and liabilities with the hospital personnel who used the elevator regularly. Soon, Eric began a friendly relationship with many hospital staff and we found that they began advocating for Eric in the presence of strangers on the elevator.

The basic training model included providing verbal prompts during operation of the elevator. Few more intrusive prompts were required during training with the exception of the first occasion when the elevator became stuck between floors. Practice on the procedures for this emergency and the use of clear elevator language was then provided during slow business periods. The trainer gradually faded herself to the back of the elevator and began riding the vehicle on a gradually decreasing schedule.

Client Evaluation Data. Eric's progress may be examined through the following sources:

1. Absences and Tardiness. After 37 days of work to date, Eric has never been absent or late.
2. Percent of work time on-task. Utilizing the observation techniques discussed above, Eric's overall rate of work regularity can be established. Figure 2 illustrates that Eric averaged an on-task work rate of over 95%. From general observations made of

other elevator operators including Eric's supervisor, he exhibited a higher rate of on-task behavior. On-task behavior was defined as: "Pushing elevator buttons, looking for passengers and freight from seat or standing, speaking or nodding to passengers on elevator or in front of elevator."

3. Frequency of trainer prompts. Figure 2 also indicates a somewhat erratic need for prompts initially probably because the requirements of the job changed from day to day. However, a reduction in the number of prompts required can be seen as training progressed.
4. Supervisor Evaluation. The most recent supervisor evaluation is found in Table 4 and indicates a favorable assessment of Eric's progress.

Insert Figure 2 here and
Table 4 here

5. Total Wages Earned. Eric's total earnings to date are \$418.84 for 37 days work on a 20 hour a week at \$2.83 per hour. Eric was offered a full-time position to begin in the near future.

Case Study III - Food Service Placement

Behavioral Characteristics. Len is a 22 year old white male with a measured intelligence quotient of 51. He is ambulatory and verbal although lacking appropriate social skills, i.e. inappropriate verbalizations. Len was referred to Project Employability for special help in placement because of his difficulty in getting along with peers and need for constant seeking of approval and attention. An excerpt from the counselor referral letter is provided in Table 5. Len lived in a very difficult home situation and only recently moved to a local group home.

ERIC- ELEVATOR OPERATOR

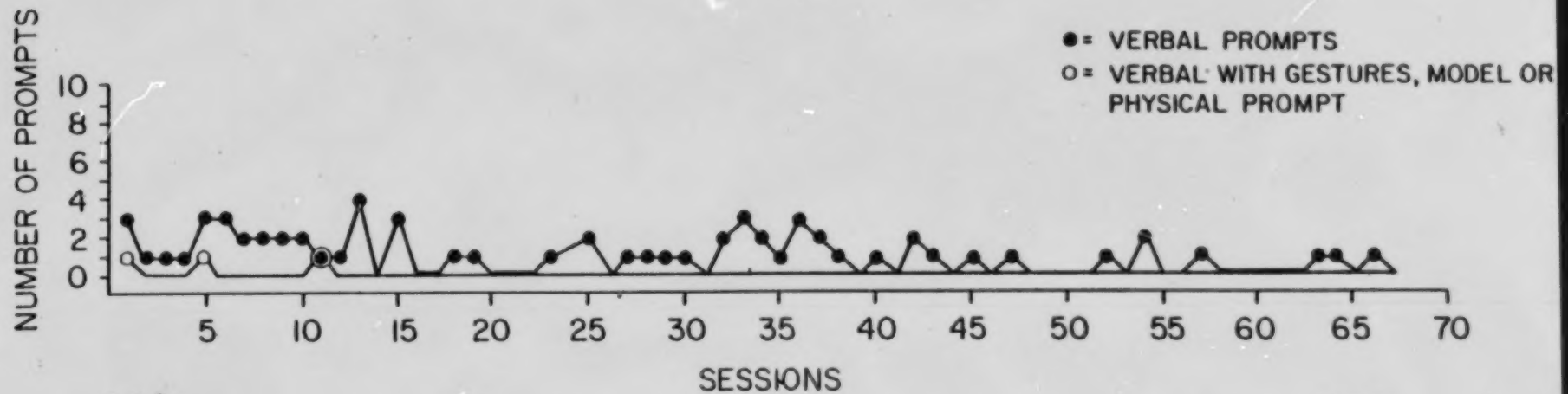
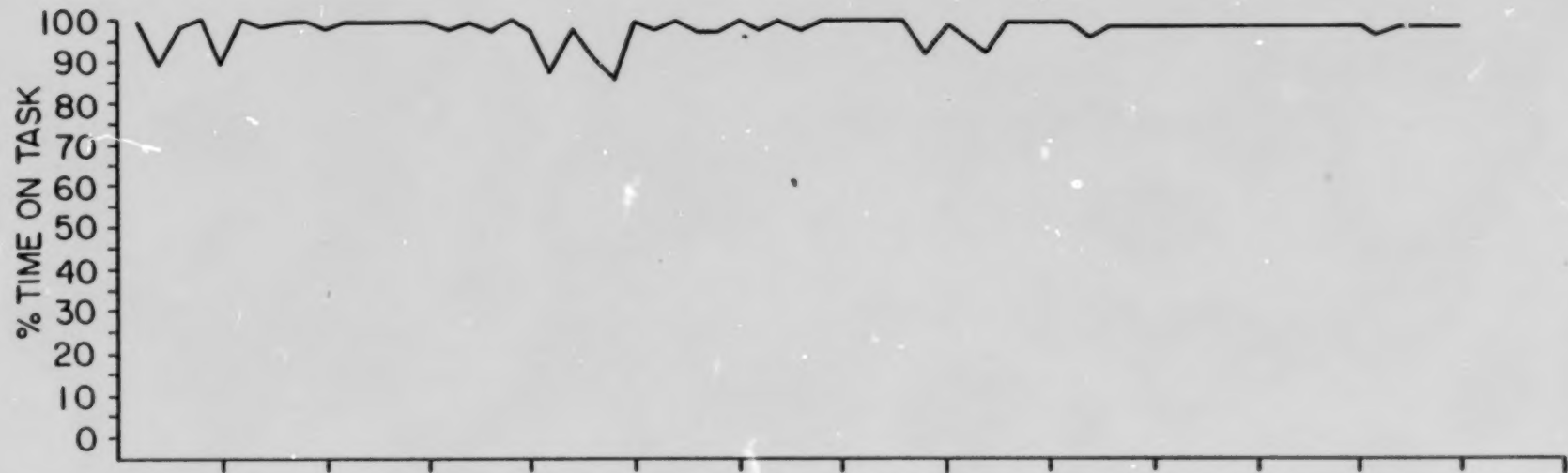


Table 4

SUPERVISOR'S EVALUATION FORM - BIMONTHLY

TRAINEE/EMPLOYEE'S NAME ERIC DATE OF PLACEMENT 11/20/76
 JOB TITLE Elevator Operator DATE HIRED 12/1/76
 JOB SITE _____ CURRENT DATE _____
 JOB COORDINATOR _____

PLEASE CIRCLE ALL ITEMS WHICH APPLY TO THE TRAINEE/EMPLOYEE:

1. The employee ☒ a) generally arrives and leaves on time
☒ b) maintains good attendance
☒ c) takes meals and breaks appropriately
☒ d) maintains a good appearance
 Comments on un-circled items: _____
2. The employee has ☒ a) mastered all aspects of present job
☐ b) mastered many but not all aspects of job
☐ c) not mastered essential aspects of job to date
3. In order for the employee to follow directions regarding the job, the supervisor ☒ a) can just give verbal instructions
☒ b) has to give many gestures as well as verbal instructions
☐ c) has to show the employee exactly what to do before he/she knows what to do
4. Project Employability staff is present
☐ a) too often
☐ b) too little according to the employee's needs
☒ c) an appropriate amount of time
5. This employee ☒ a) frequently stops work and needs to be reminded to return to work
☒ b) works at a constant rate without reminders
☐ c) stops working occasionally but no more than other employees
6. The employee is ☒ a) a good worker
☐ b) an average worker
☐ c) a below average worker
7. Does the Project staff in any way interfere with your supervision or plans for the employee? ☒ a) no ☐ b) yes (if yes, please briefly describe)

Other comments: _____

SUPERVISOR C. F.

Insert Table 5 about here

Previous Vocational Training. Len had received formal food service training from Woodrow Wilson Rehabilitation Center in Virginia. Although he did not have prior employment experience he had strong evaluations on his work adjustment performance. Project Employability staff felt that with appropriate advocacy and supervision that Len could succeed in a food service position. He had also received less intensive training in a public school program for trainable level mentally retarded students.

Job Requirements and Setting. A kitchen utility placement was made at the same university that Chuck worked at except it was in a much more hectic cafeteria setting. This cafeteria made a large number of servings per day and over 75 food service employees worked there. The job required busing tables, mopping, sweeping, operating heavy equipment, emptying trash, and cleaning trays. It also required that workers perform with minimal supervision. We felt that Len could succeed on this job provided he had initial support from staff.

Job Training. Since Len already could perform the jobs above competently our role was one of working out transportation, stabilizing Len's work hours, and helping orient nonhandicapped coworkers to Len. It was evident after several days that Len moved faster than many of his coworkers. Ironically, this was also a problem which had to be considered. The major training problem that was presented in Len's case was helping him readjust to work after the three week Christmas holiday. It was necessary for staff to resume a closer 1:1 relationship with him until he got back in the work routine.

Table 5

Excerpt from Rehabilitation Report for Len

Len is a very hard worker and an excellent producer in the areas of dish-washing, cleaning, and working with tray carts. His major problem is a need for attention, primarily from his work supervisor. He will demand frequent verbal reinforcement that his work is acceptable. However, when given strong supervision that does not encourage this attention seeking, he can work effectively. His participation in the employability project would allow your instructor to assist him without demanding so much time and energy from the university work supervisor. I am expecting that at the end of 30 day trial placement period, Len will be well enough adjusted work site.

Client Evaluation Data. The following sources of data provide information about Len's adjustment:

1. Absences and tardiness. Len has missed 0 days and has not been late out of a total of 31 days worked.
2. Percent of work time on-task. Figure 3 indicates that Len was usually on-task in over 90% of the observations made.
3. Frequency of trainer prompts. As might be expected in the initial week there was a higher frequency of trainer prompts. Verbal assistance has been required to date although it has steadily decreased from four to five prompts to less than three. After the three week vacation during the holidays, Len's work habits needed retraining. Figure 3 depicts the frequency of prompting required.
4. Supervisor evaluation. The most recent evaluation by Len's supervisor indicates a generally favorable assessment. Although Len continually arrives at work too early, this problem will be alleviated when he moves into the group home.
5. Wages earned. Len has earned a total of \$657.20. He receives full fringe benefits.

 Insert Table 6 and
 Figure 3 about here

LEN- KITCHEN UTILITY

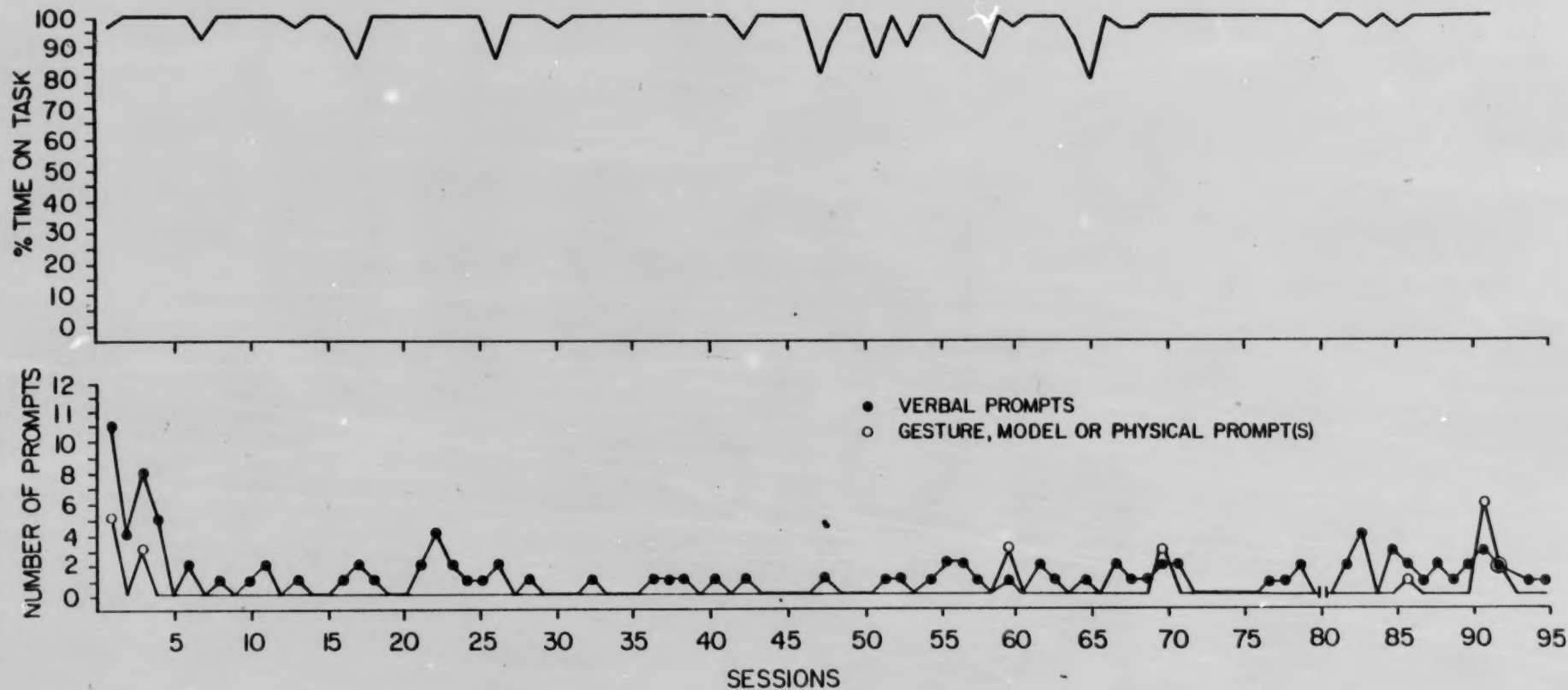


Table 6

SUPERVISOR'S EVALUATION FORM - BIMONTHLY

TRAINEE/EMPLOYEE'S NAME L. J. ... DATE OF PLACEMENT 12-13-76
 JOB TITLE ... DATE HIRED 12-13-76
 JOB SITE J CURRENT DATE _____
 JOB COORDINATOR _____

PLEASE CIRCLE ALL ITEMS WHICH APPLY TO THE TRAINEE/EMPLOYEE:

1. The employee a) generally arrives and leaves on time
 b) maintains good attendance
 c) takes meals and breaks appropriately
 d) maintains a good appearance

Comments on un-circled items: None

2. The employee has a) mastered all aspects of present job
 b) mastered many but not all aspects of job
 c) not mastered essential aspects of job to date

3. In order for the employee to follow directions regarding the job, the supervisor a) can just give verbal instructions
 b) has to give many gestures as well as verbal instructions
 c) has to show the employee exactly what to do before he/she knows what to do

4. Project Employability staff is present
 a) too often
 b) too little according to the employee's needs
 c) an appropriate amount of time

5. This employee a) frequently stops work and needs to be reminded to return to work
 b) works at a constant rate without reminders
 c) stops working occasionally but no more than other employees

6. The employee is a) a good worker
 b) an average worker
 c) a below average worker

7. Does the Project staff in any way interfere with your supervision or plans for the employee? a) no b) yes (if yes, please briefly describe)

Other comments: ...

SUPERVISOR ...

Discussion

The purpose of these case studies was to identify and describe the critical factors involved in the training and placement process of severely developmentally disabled individuals. Although these case studies are only demonstrations, they are remarkable in regard to what each of these individual's previous earning power had been. None of these individuals had ever worked competitively before. They are now drawing a weekly paycheck which is comparable to what their non-handicapped peers are making in the same setting. These individuals were selected for presentation because we feel that they provide a true picture of the planning requirements, observation and intervention difficulties, and follow-up needs which are involved in competitive employment job placement.

An analysis of Chuck, Eric, and Len provides several possible reasons for their success to date. One, they are each young, Chuck being 23, Eric 18, and Len 22. Second, they are social and outgoing; although Chuck cannot talk and Eric's speech is very difficult to understand, they exhibit positive affect regularly. Third, they each had the benefit of public school training programs. Although only Len received intensive skill instruction for the job in which he was eventually placed, it was evident that some training had occurred in social, language, domestic, and self-care training programs for each individual. Fourth, in Eric's and Chuck's case, the family commitment was less protective and more responsive to professional help. Fifth, all three individuals followed instructions of the project staff and eventually the permanent supervisor with little resistance. Finally, and perhaps most importantly, each client had the good fortune of an immediate supervisor who very much wanted him to succeed.

Placement of severely developmentally disabled individuals into a nonrestrictive competitive employment is a difficult process. There are many avenues in which breakdowns can occur. Without a trainer-advocate available regularly for several weeks initially, the probability of sustained employment would appear to be dubious in the majority of cases. Although we are still too early in our project to make definitive conclusions about the key factors in successful employment for this population, it is safe to say that without important support systems such as positive parent attitude and transportation, no amount of skill development or wage reimbursement for employers will matter.

The data presented herein reflect the information which is necessary to evaluate the job performance of severely developmentally disabled clients. Multiple sources of data provide staff with the capacity to objectively evaluate and track an individual's progress. Daily observations yield a steady index of feedback to the employer and project staff. Unfortunately, these case studies were not evaluated in rigorous within-subject designs; we hope, in future work, to provide this type of design. However, it must be noted that implementing these type of designs, i.e. multiple baselines, reversals, is at times quite difficult in a high pressure atmosphere of a college cafeteria.

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AN ORIENTATION MANUAL FOR EMPLOYERS OF HANDICAPPED INDIVIDUALS

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An Orientation Manual for Employers of Handicapped Individuals

In working with employers of the handicapped, through Project Employability, we have found many individual managers and supervisors who requested more specific information concerning handicapped employees. Employers wanted to know information such as: how best to train the employee, how to give job directions, what is the meaning of the handicapping condition and how to orient him to his co-workers and surroundings. Questions were also asked regarding the monetary benefits the employer could receive in the form of training funds and tax benefits when a handicapped individual is employed. The answers to these questions and others are summarized in this paper so that employers may obtain a better understanding of disabled workers. It must be remembered that a handicap is only one characteristic of the individual and that there are many more characteristics which separate him from others having a similar handicap.

What are Disability Conditions?

A handicapped individual is a person who (1) has a physical or mental impairment which substantially limits one or more of that person's major life activities, (2) has a record of such impairment, or (3) is regarded as having such an impairment. The term "major life activity" refers to any physical or mental activity or function, which, if impaired, creates a barrier to employment.

A "qualified handicapped individual" refers to a handicapped individual as defined above who is capable of performing a particular job, with reasonable accommodation to his handicap and meets the minimum acceptable

level of productivity applicable to a nonhandicapped employee.

It is the purpose of Project Employability to supply and train "qualified handicapped individuals" to meet the needs of prospective employers.

Range of Disabilities

Mental Retardation

Mental retardation refers to a condition in which the person functions with less than normal intellectual and social ability. Some are further handicapped by emotional and physical disabilities. About three percent of our population can be diagnosed as mentally retarded and 85 percent of these can become functioning and self-sufficient members of society with the proper education and training. There are an estimated three million retarded persons of working age and capable of full-time employment in the United States today.

Cerebral Palsy

"Cerebral" refers to the brain, "palsy" to lack of control over the muscles. It is not a single disorder but a group of dysfunctions having a variety of symptoms. All are brain-centered and all affect muscular control as well as sensory functions. The condition is not progressive, but it has no cure. There are essentially three main types. The spastic person moves stiffly and with difficulty. The athetoid has involuntary and uncontrolled movements. The ataxic has a disturbed sense of balance and depth perception. For some persons with cerebral palsy, jobs must be simple. Others have attained professional careers. There are persons with cerebral palsy in almost every type of occupation.

Epilepsy

The term "epilepsy" refers to a number of disorders of the nervous system, centered in the brain. While the term comes from the Greek word meaning "to be seized" epilepsy is a symptom of a disorder of the central nervous system. It is characterized by sudden seizures, muscular convulsions and partial or total loss of consciousness due to abnormal electrical discharging of brain cells. It is important to know that epilepsy usually does not effect a person's intelligence. About half of the persons with epilepsy have their seizures controlled by medication, and another small group have little effect from their condition. A wide range of occupations are performed successfully by epileptics from unskilled labor to professional, business and managerial types.

Hearing Impaired

Thirteen million of our population have some hearing impairment. It is estimated that one out of every 500 adults is impaired beyond hope of restoration (deaf). The term deaf and dumb carries negative connotations and is no longer in use. The preference is to use deaf or hearing impaired. Deafness is classified as conductive or sensorineural (nerve deafness). A common problem of prospective employers is fear of the communication gap between hearing and non-hearing persons. However, deaf persons possess varying degrees of speaking (signing) and lip-reading abilities which helps to narrow the communication gap.

Why Hire Handicapped Employees?

One of the major means of achieving a good attitude toward oneself is through means of employment. This is the same for the disabled employee as it is for any other employee. Handicapped individuals want to work, to do a good job, to carry out an employer's directions and achieve a sense of competency. They find high rewards in the approval of co-workers and supervisors. The disabled employee will have an excellent attitude toward his job if he knows how to do all aspects of it.

The more positive the attitude which the handicapped individual has toward his job is, not surprisingly, paralleled by a high rate of attendance and non-tardiness. Job stability is an important factor for the handicapped employee and his length of employment at a particular job, which may last a lifetime, more than compensates for the occasionally lengthened training. Since many find positions with employers of low level, high turnover jobs the handicapped employee, because of his length of employment and quality of work, often becomes a stabilizing force within the work setting.

What Other Benefits are Available to Those Who Hire Handicapped Employers?

Tax Credits

Public Law 95-600 of the Revenue Act of 1978, Subtitle C-Section 321 has been of interest to the business world. This law stipulates that a company be compensated (with no government paperwork of contract forms other than IRS related forms) for half of the first \$6,000 in wages, paid a handicapped adult or youth, for the first year in which he is employed. A credit for 25% of the first \$6,000 in wages is given for the second year.

This is approximately a 37½% return to the employer if the employee makes \$6,000 per year. For further information contact your local I.R.S. or state employment service. The law may change slightly from year to year.

Training Funds

The National Association for Retarded Citizens encourages employers to train mentally retarded individuals by making funds available for this purpose in many parts of the country. If a retarded individual is employed for 35 hours or more a week, receives minimum wage or better and workman's compensation, then he is eligible for on-the-job training funds. Fifty percent of his salary for the first four weeks and 25% of his salary for the second four weeks will be reimbursed to the employer with minimal paperwork at the end of the eight week training period. In addition, the federal tax credit may also be used after training.

Workman's Compensation and Insurance

Contrary to myth, the employer's workman's compensation rates do not rise if he hires handicapped workers. In fact, property and liability insurers have repeatedly pointed out the excellent work records of the handicapped who have fewer accidents than the average worker. Group health plans and pension programs are not affected adversely by hiring the handicapped. Any state Workman's Compensation Board will be glad to answer any other questions.

Special Minimum Wage

The Department of Labor, in some cases, authorized a special minimum wage for severely handicapped workers. This special minimum wage may be

as low as 75% of the statutory minimum wage. However, if clearly justified, it may be further reduced to 50%, but seldom lower. The Department of Vocational Rehabilitation may be contacted for special information on special minimum wages.

How Can a Supervisor Train Handicapped Employees?

A supervisor's first step in training any individual should be to clearly specify job duties. This task is no different with the handicapped individual. In general, the supervisor may want to give a written job list to the individual who can read or a simple pictorial list to one who cannot. In addition, job duties can at times be pointed out or shown by another employee who the supervisor knows does the job correctly. Pairing the handicapped employee with another employee may be the best way to accomplish several things. Employees given a temporary designation of trainer rise in their own eyes and those of their co-workers. In such a capacity they tend to perform more efficiently and therefore teach the handicapped employee to learn his job in the most efficient manner. This has also proven to be very effective in orienting the new employee to his co-workers and surroundings which is a big step in job success.

Directions can be given to the handicapped worker often as they are given to anyone else. At times the language may need to be simplified; however, if the employee appears not to understand, it is important to remember that your employee is an adult--not a child--and your tone of voice should indicate this. When a task is very difficult or completely new the supervisor may want to use gestures while talking or show him how it is done by having someone do the job while he watches. During the

initial stage of learning a job someone may even physically help the handicapped individual through the task.

To help the new employee get to know his co-workers he should be informally introduced. Pairing the new employee with the temporary trainer is also one of the quickest ways he can get to know his co-workers.

Conclusion

Many employers have learned the benefits of hiring the handicapped and this paper points out only a few, based on questions that new employers have asked. If you want to know more of the benefits ask the Department of Rehabilitative Services serving your area or ask an employer of a handicapped individual. If you want a good, long-term employee then hire handicapped individuals.

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JOB PLACEMENT OF SEVERELY DISABLED
PERSONS: YEAR ONE PROGRESS REPORT

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Job Placement of Severely Disabled
Persons: Year One Progress Report

The purpose of this report is to present a detailed description of the data collected on each client placed by Project Employability in the first year of the project. With the normal start-up time necessary for getting a new program off the ground, we have only begun to make competitive employment placements within the last six to eight months.

The Table on the following page presents a summary of all relevant variables including age, sex and previous employment experience of placed clients, current job and employer, average hours worked per week, cumulative wages, and source of referral. This data summary provides an important first year benchmark to evaluate progress made in second and third years of the project as well as to build a significant data base from which to form certain conclusions about placement of the severely disabled.

After the summary Table, each client's data are presented with graphs. A brief overview of the client's background, job, and training precede the data.

TABLE 1. JOB PLACEMENT SUMMARY SHEET - Year One

Client ^{1,2}	Age	Client Disability	DRS Status	Job Title	Avg. Hrs Worked Per Week
1. Len	22	Moderately Retarded	22 - Work ready; however, considered marginal	Food Service Utility Worker	40
2. Chuck	23	Severely Retarded/Non-Verbal	None	Food Service Utility Worker	30
3. Eric	18	Borderline M.R./Spastic Quad./Severe Speech Imp.	18 - Ready for training program	Freight/Passenger Elevator Operator	20 to 40
4. Ted	55	Moderately Retarded/Slight Visual Impairment	28 - Services closed	Food Service Utility Worker	40
5. Ned	35	Moderately to Severely Retarded	28 - Services closed	1) Groundsman; 2) Pot Scrubber	40 25
6. Bonnie	27	Moderately Retarded	None	Food Service Worker	40
7. Bill	26	Moderately Retarded/Speech Impairment	28 - Services closed	Kitchen Utility Worker	40
8. Jenny	34	Moderately Retarded	28 - Services closed	Dining Room Worker/Line Runner	40
9. Sam	29	Shunted Hydrocephalic/Right Eye Blind/M.R.	28 - Services closed	Dish Machine Operator	25
10. Jack	33	Moderately Retarded/Profoundly Deaf/Cerebral Palsy	18 - Ready for training program	Pot Scrubber	25

¹Fictitious names have been used.

²Due to time involved in start-up of project the first placement w

Progress Report for Project Employability - March, 1979

Employer	Date of Field Training	Date Hired	Source of Client Referral
University of Richmond Main Cafeteria	11-13-78	11-13-78	D.R.S.
University of Richmond Dry Dock Restaurant	10-1-78	10-23-78	Richmond Adult Services Center
Medical College of Virginia Transportation Department	11-20-78	12-1-78 part time; 2-1-79 full	D.R.S.
Medical College of Virginia, Dept. of Food Service	2-16-79	2-16-79	Henrico Adult Services Center
Univ. Richmond Grounds; Lakewood Nursing Home	10-1-78; 3-23-79	10-20-78 to 12-20-78; 3-23-79	Richmond Adult Services Center
Henrico County Employee Cafeteria	3-5-79	3-5-79	Henrico Adult Services Center
University of Richmond Main Cafeteria	12-8-78	3-19-79	Henrico Adult Services Center
University of Richmond Main Cafeteria	12-8-78	3-19-79	Henrico Adult Services Center
Lakewood Manor Nursing Home Kitchen	3-19-79	3-19-79	Henrico Adult Services Center
University of Richmond Main Cafeteria	2-23-79	3-26-79	Richmond Group Home and D.R.S.

as not made until October 1978.

Table 1 continued

Client	Total Days Absent	Total Days Tardy	Total Wages Earned	Fringe Benefits Available	Frequency of Positive Supervisor Evaluations	Previous Employment Experience	Degree of Previous Skill Training	Present Employment Status
1. Len	0	0	\$1889.00 2.90/hr.	Comprehensive	3 out of 3	None other than work adjustment in a workshop	Woodrow Wilson Rehabilitation Food Preparation	Hired Full Time
2. Chuck	0	0	\$1615.00 2.90/hr.	Comprehensive	4 out of 4	None	Arts and Crafts; Domestic Skill Emphasis	Hired Full Time (30 hours per week)
3. Eric	4	0	\$1540.00 2.90/hr.	Comprehensive	3 out of 3	None	Cerebral Palsy Center in Academic Training and Physical Therapy	Hired Full Time
4. Ted	1	4	\$682.00 2.90/hr.	Comprehensive	2 out of 2	None other than work adjustment at Goodwill Industries	Short Period of Janitorial Training at Henrico Center	Hired Full Time
5. Ned	0	0	\$871.20 2.90/hr.	None due to part time status	0 out of 1 from Groundsman job; not yet received from Kitchen job	Goodwill Industries 9 years	Extended Sheltered Training; Arts and Crafts Emphasis	Hired Part Time
6. Bonnie	0	0	\$371.00 2.95/hr.	None (CETA Employed)	1 out of 1	None other than short employment at a local restaurant	Food Service and Janitorial Training at Henrico Center	Hired Full Time (CETA - 18 month program)
7. Bill	0	0	\$173.00 2.90/hr.	None at present - Conditional Employ.	2 out of 2	Goodwill Industries	Short Period of Janitorial Training at Henrico Center	Hired Full Time Conditional (2 month re-eval.)
8. Jenny	0	0	\$170.00 2.90/hr.	Comprehensive	2 out of 2	Goodwill Industries	Industrial and Domestic Skill Training	Hired Full Time
9. Sam	0	0	\$138.00 2.90/hr.	None due to part time status	1 out of 1	None	Short Period of Food Service and Janitorial Training at Henrico Ctr	Hired Part Time
10. Jack	0	3	None to date; 2.90/hr.	None due to part time status	1 out of 1	Part time at restaurant for short period of time	Minimal Training in Janitorial Area	Hired Part Time

Clients Hired into Competitive Employment and
Placed into Nonpaid Field Training

Len

Len is a 22-year old verbal male referred to Project Employability by a local service counselor. Len had recently received food service training at Woodrow Wilson Center but required supervision in order to ensure maintenance of a job. He was classified as mentally retarded with an reported IQ of 51. Len lived in a group home.

Project Employability staff helped Len find a food service utility job at the University of Richmond. His jobs involved busing tables, emptying trash, refilling the salad bowl, sanitizing trays, and operating the vacuum cleaner.

The primary difficulties Len experienced were in getting to work too early because he could not tell time. He lacked many critical independent living skills and his social behaviors were frequently inappropriate i.e. constant need for attention. Greater detail on Len is provided in an earlier paper in this volume which describe three competitive employment case studies. Len had never worked before.

Here is the summary of Len's evaluation data:

Previous Rehabilitation Status: Referred from local counselor's caseload

Date Hired: November, 1978

Absences and Tardiness: None

Percent of Time on Task: 98.2%

Average Frequency of Trainer Prompts: 1.40 verbal prompts per session
.33 gestural or physical prompts
per session

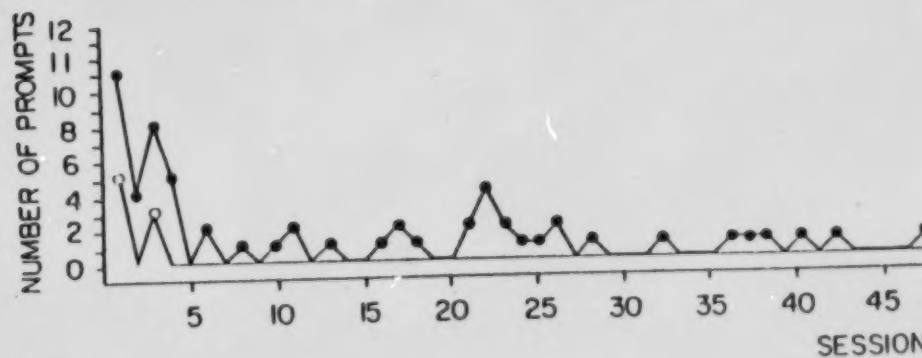
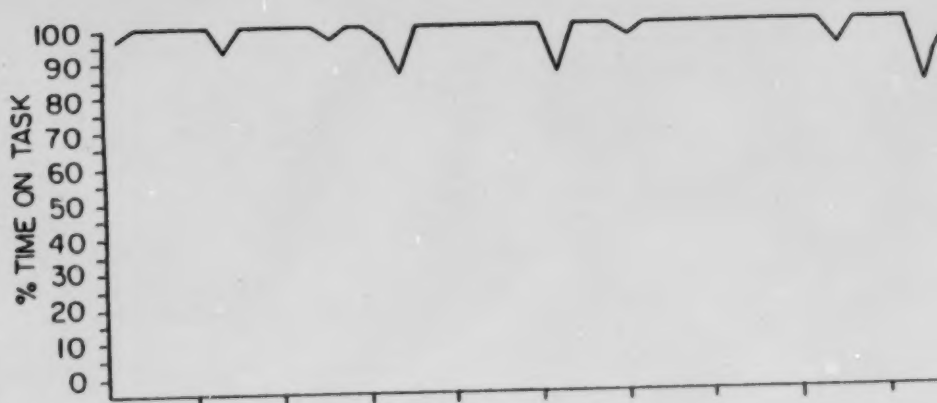
Total Wages: \$1889

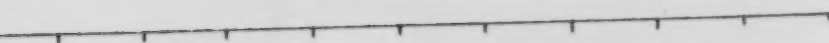
Comprehensive Fringe Benefits: Yes

Supervisor Evaluations: Positive except for getting to work too early

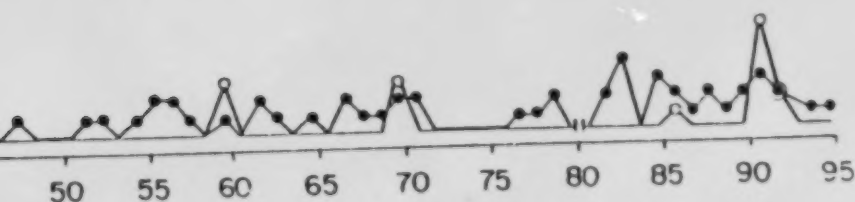
The following graph depicts Len's daily work behavior.

LEN- KITCHEN UTILITY





- VERBAL PROMPTS
- GESTURE, MODEL OR PHYSICAL PROMPT(S)



NS

Chuck

Chuck is a 23-year old nonverbal male who had been attending the Richmond Adult Services Center for several years when Project Employability began to work with him. Chuck resides at home and, although his measured IQ is reported to be 27, he is a very social and outgoing individual. Project Employability trained Chuck in kitchen utility skills and placed him at the University of Richmond in that capacity but in a different cafeteria than Len.

Chuck had never been placed on a rehabilitation counselor caseload because of his apparent lack of vocational potential. In fact during his training at the Center he was observed by a local counselor and still considered unable to work productively. The skills required of Chuck were similar to Len's but the pace was far less hectic. Because Chuck lived at home, his father was able to take him and pick him up from work each day.

Chuck's independent living skills were also deficit, especially in functional academics i.e. use of telephone, and meaningful expressive communication. He continues to require training in these areas. Chuck had never worked before.

Here is the summary of Chuck's evaluation data:

Previous Rehabilitation Status: Considered too difficult for
counselor caseload

Date Hired: October, 1978

Absences and Tardiness: None

Percent of Time on Task: 85.9%

Average Frequency of Trainer Prompts: 1.47 verbal prompts per session
.64 gestural or physical prompts
per session

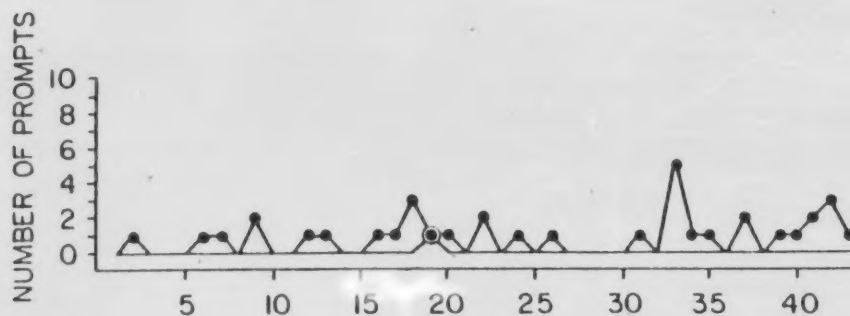
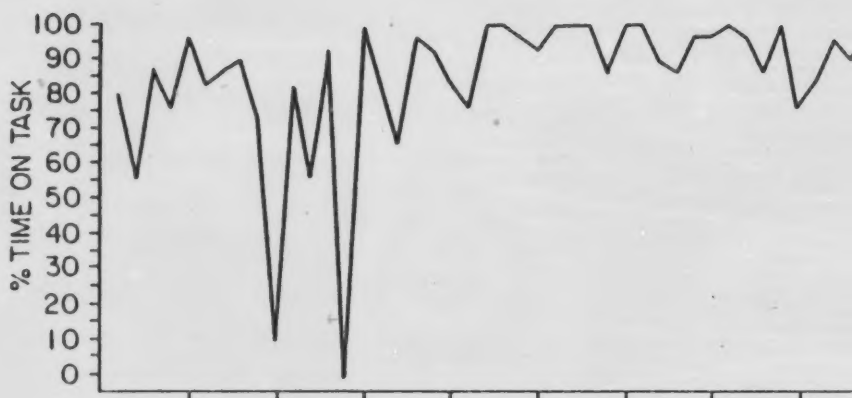
Total Wages: \$1615

Comprehensive Fringe Benefits: Yes

Supervisor Evaluations: Positive except for occasional appearance problems.

The following graph depicts Chuck's daily work behavior.

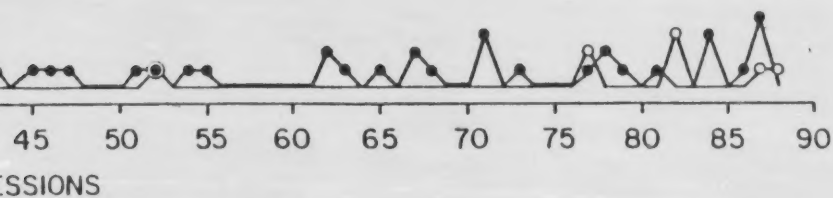
CHUCK - KITCHEN UTILITY





● = VERBAL PROMPTS

○ = GESTURE, MODEL OR PHYSICAL PROMPT(S)



Eric

Eric is an 18-year old verbal male referred to Project Employability by a local service counselor. Eric had been attending the Cerebral Palsy Center in Richmond and was considered to be a poor candidate for competitive employment. Due to a severe language impairment, mild retardation, and a clumsy motor gait, his job prospects did not appear bright. Eric lived at home.

Project Employability helped Eric secure a full-time job as an elevator operator at the Medical College of Virginia. This job required number discrimination from 1-10, the ability to say "Going up?," and holding the door for freight to be loaded. After one week of nonpaid training, Eric was hired. Eric is presently receiving bus training to facilitate his independent travel to and from work. Eric had never worked before.

Here is the summary of Eric's evaluation data:

Previous Rehabilitation Status: Referred from local counselor

Date Hired: December, 1978

Absences and Tardiness: 4 days absent

Percent of Time on Task: 99%

Average Frequency of Trainer Prompts: .9 Verbal prompts; .01
Gestural, models, and
physical prompts per session

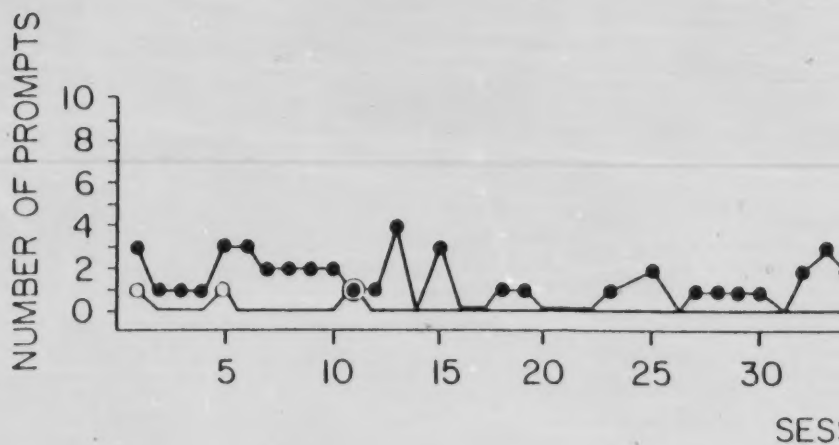
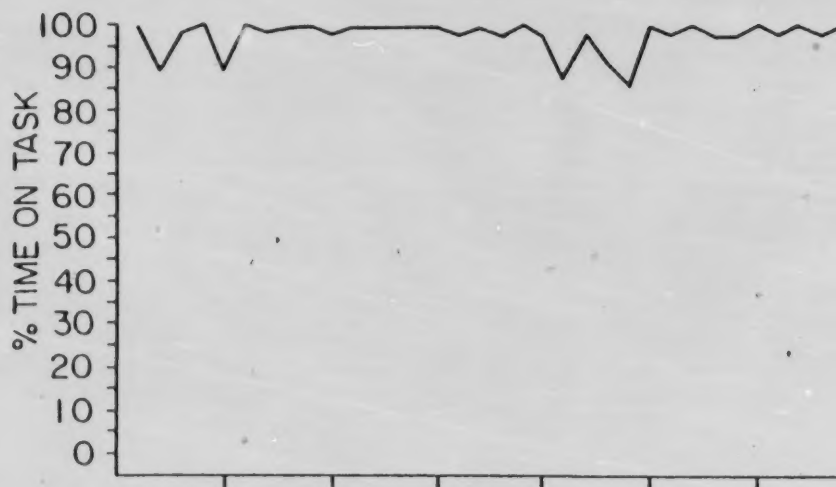
Total Wages: \$1540

Comprehensive Fringe Benefits: Yes

Supervisor Evaluations: Positive

The following graph depicts Eric's daily work behavior.

ERIC- ELEVATOR OPERATOR





● = VERBAL PROMPTS

○ = VERBAL WITH GESTURES, MODEL OR
PHYSICAL PROMPT



SIONS

Ted

Ted is a 55-year old male with a reported IQ of 45. Although he has a positive personality, he is partially visually impaired and has an uncoordinated shuffling gait. Ted lives in a boarding house near the cafeteria in which he was placed. Project Employability began to work with him after he was returned to the Henrico Adult Services Center. Placement into Henrico was a result of being terminated from the Goodwill Industries workshop. At this point Ted was no longer on any rehabilitation counselor's caseload.

Project Employability helped Ted secure a job in an employee's cafeteria at the Medical College of Virginia. A major problem Ted has had is getting to work on time largely because of his inability to tell time. Ted's job includes filling salad bowls, busing tables, cleaning the floors, etc.

Ted's evaluation data are below:

Previous Rehabilitation Status: Considered too difficult for
counselor caseload

Date Hired: February, 1979

Absences and Tardiness: 1 Absence
4 days late

Percent of Time on Task: 95%

Average Frequency of Trainer Prompts: 4.6 Verbal prompts; 1.57
Gestural, models, and
physical prompts per session

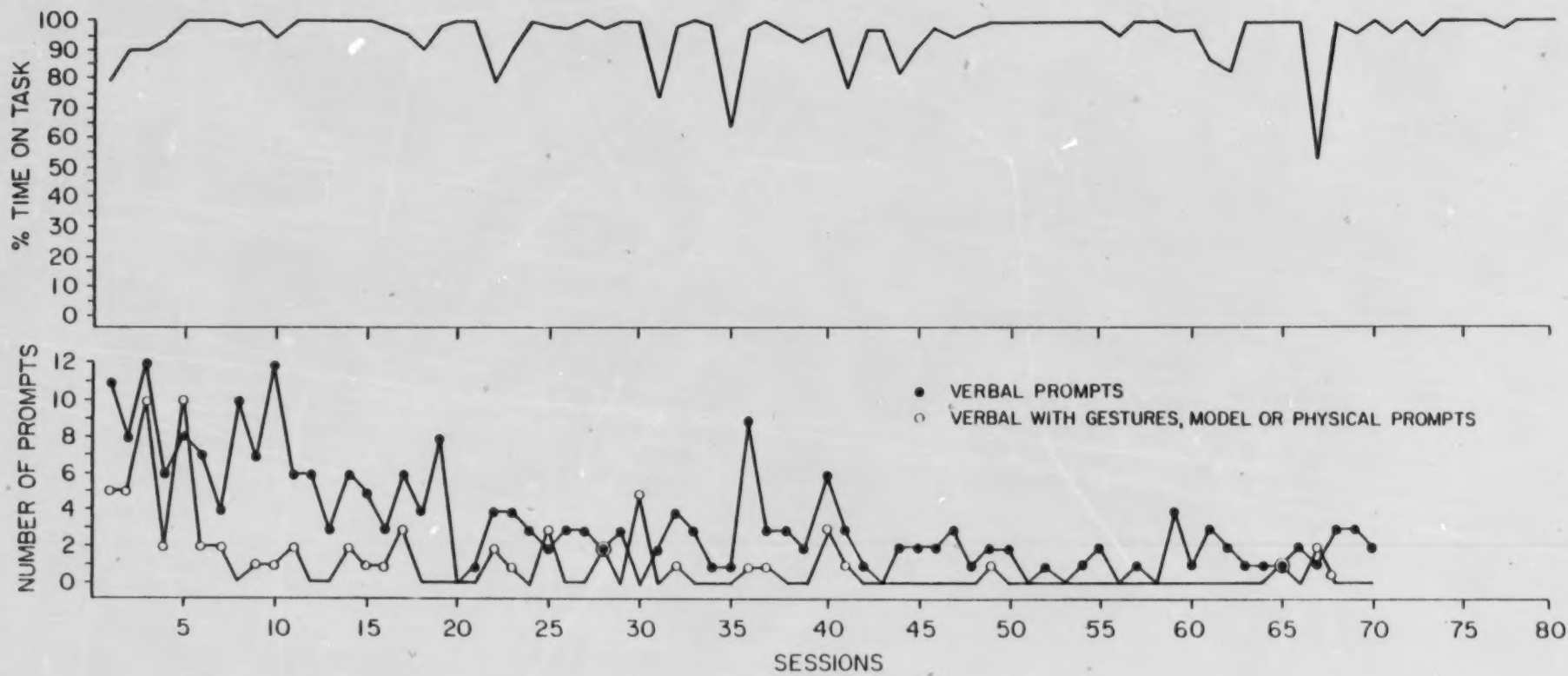
Total Wages: \$632

Comprehensive Fringe Benefits: Yes

Supervisor Evaluations: Positive

The following graph indicates: Ted's work behavior.

TED-
KITCHEN UTILITY



Ned

Ned is a 35 year old man with Down's Syndrome. He is classified as moderately to severely retarded with an I.Q. of 41; however, Ned, physically, moves very slowly when performing any behavior. This aspect of his functioning is his greatest disability and decreases his proficiency on all tasks.

Ned worked in a sheltered workshop for nine years but he was laid off several years ago due to low production rates. Since that time he has attended an activity center program for mentally retarded adults in a church.

Project Employability had previously placed Ned in two different job types; both placements were unsuccessful due to Ned's lack of speed. The first was a Groundsman's position as a trash stabber on a large college campus and the second attempt was a Food Service Utility Worker as a bus boy. On the former job, Ned was hired and received wages; however, after three months of training, Project Staff and the employer agreed mutually that Ned simply could not complete the job adequately due to lack of speed. Ned, then, received two weeks training as a bus boy; however, the employer did not have an opening for Ned at that time.

The Project, then, searched for a position which was more appropriate for Ned. Ned has recently been placed in a Pot Scrubber's position for a small, slow-paced kitchen at a Nursing Home. He was placed on the payroll on his first day of training. He is responsible for the sink area only in preparing pots and sinks, scrubbing pots, and putting them away. The employer has stated speed is not the most essential factor but rather thoroughness.

His training, thus far, included 100% trainer supervision and the use of verbal, gestural, modeling and physical prompts. Ned is reinforced for proficiency and speed with verbal approval and pats on the back.

The data below is a composite report of the three training placements:

Previous Rehabilitation Status: 28 - Services closed

Dates(s) Hired: Groundsman (10/20/78 to 12/20/78); Pot Scrubber (March 23, 1979)

Absences and Tardiness: Zero in over 75 days of work and training.

Average Percent of On-task Behavior:

Groundsman = 90.09% per session

Food Service Utility = 93.50% per session

Pot Scrubber = 85%

Average Number of prompts:

Groundsman = 1.41 Verbal prompts/.46 Gestures, models, or physical prompts per session

Food Service Utility = 4.86 Verbal prompts/2.05 Gestures, models or physical prompts per session.

Pot Scrubber = 8 Verbal prompts/7 Gestures, models or physical prompts per session

Total Wages Earned: \$871.20 as a Groundsman for two months of full-time paid work and one week of part-time work as a Pot Scrubber (\$2.90 per hour).

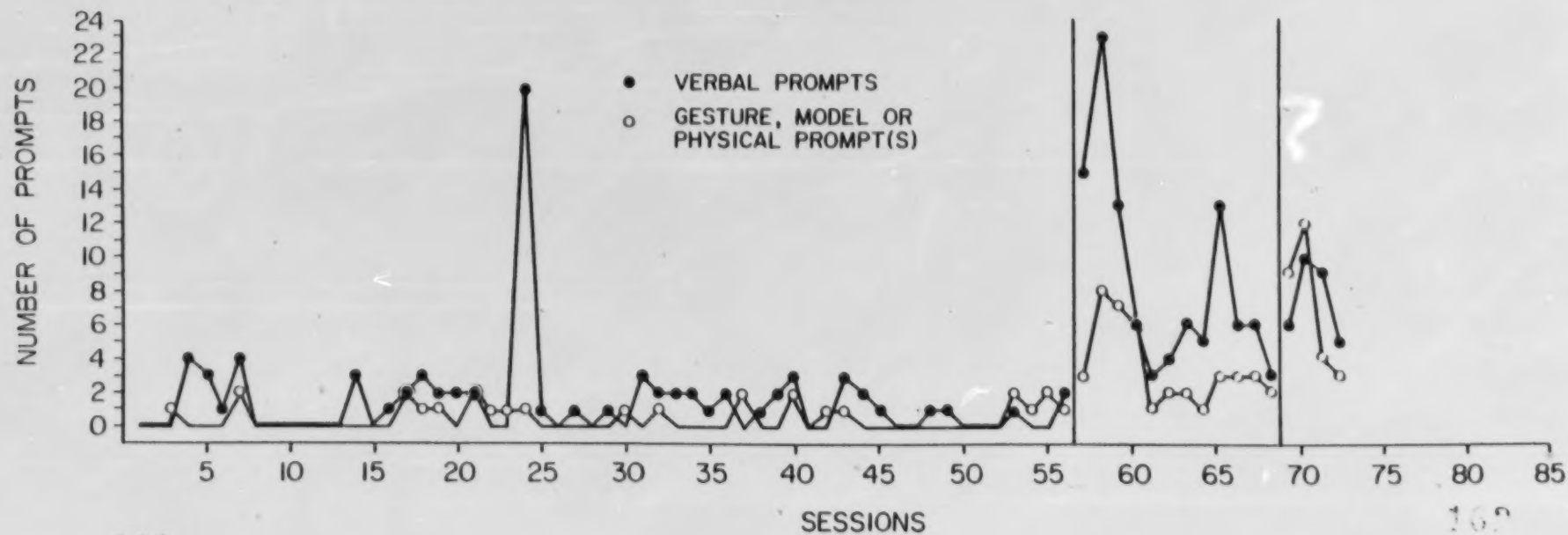
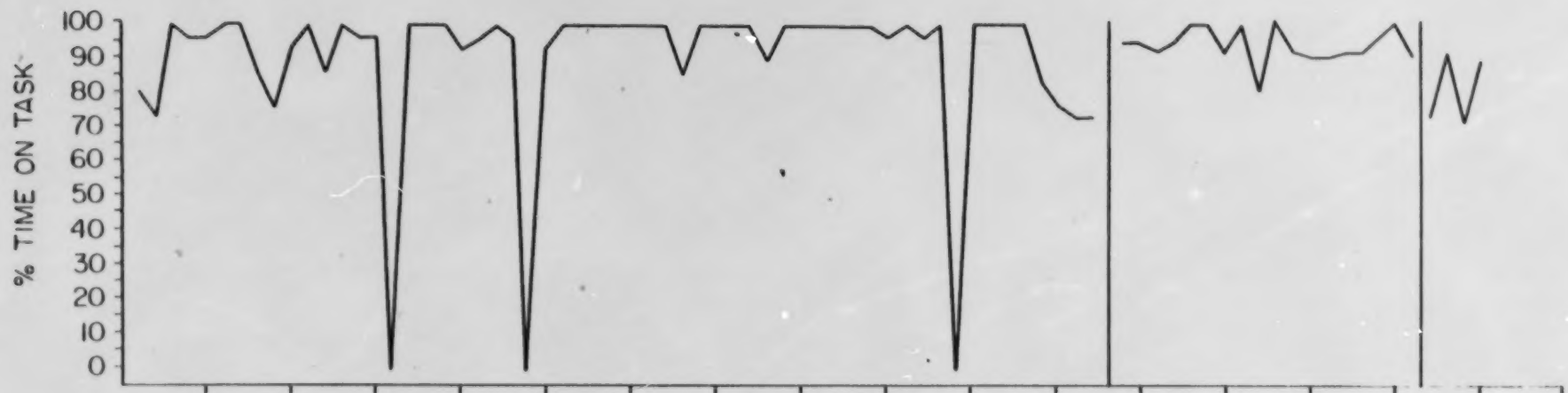
Comprehensive Fringe Benefits: No (Part-time).

Supervisor Evaluation: Groundsman = negative due to speed; Food Service = Positive; Pot Scrubber = Not yet received.

The graph on the following pages indicates Ned's progress.

NED -
GROUNDSMAN

FOOD SERVICE
UTILITY WORKER POT
SCRUBBER



Bonnie

Bonnie is a 27-year old female who is verbal and who has a reported IQ of 44. She presently resides in a group home with five other retarded adults. Project Employability began to work with her at the Henrico Adult Services Center which she has attended for several years. Bonnie has a history of anti-social behavior and verbal aggression when frustrated. In the only effort to ever place Bonnie into a job she was fired within three days. This placement, in the food service area, was facilitated by Adult Service staff.

Project Employability placed Bonnie into the Henrico County Complex employee cafeteria. We were able to utilize CETA funds for Bonnie and to date she has done an excellent job. Bonnie's job requires tray sanitizing, pot scrubbing, and some food preparation. She works with 12 other nonhandicapped employees. Bonnie has no rehabilitation counselor.

Here are Bonnie's evaluation data:

Previous Rehabilitation Status: Considered too difficult for caseload

Date Hired: March, 1979

Absences and Tardiness: None

Percent of Time on Task: 96%

Average Frequency of Trainer Prompts: 2.90 verbal prompts per session;
1.72 gestural models or physical prompts

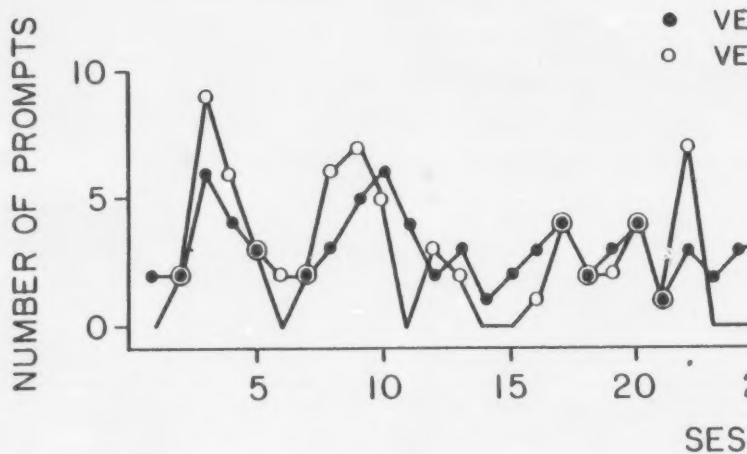
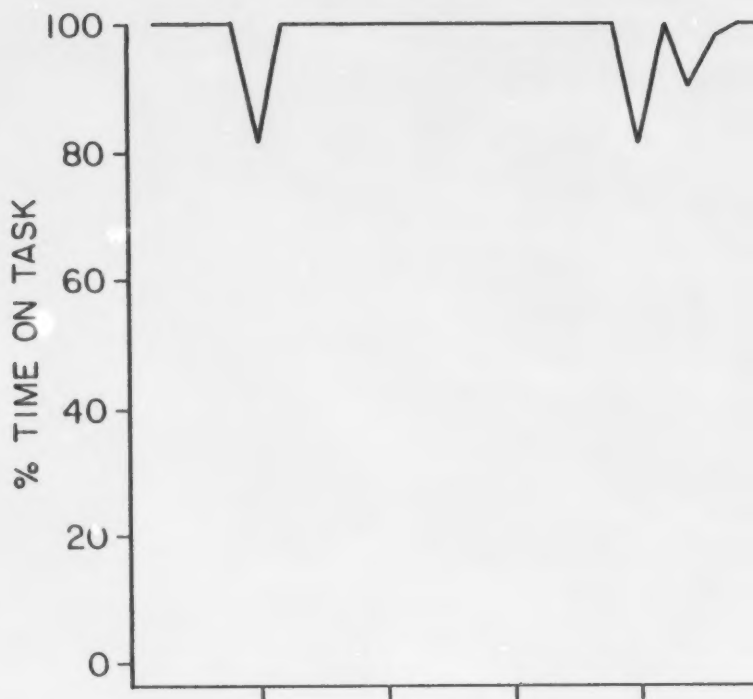
Total Wages: \$371

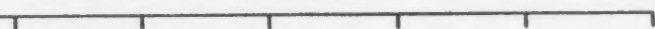
Comprehensive Fringe Benefits: No (CETA Funding)

Supervisor Evaluations: Positive

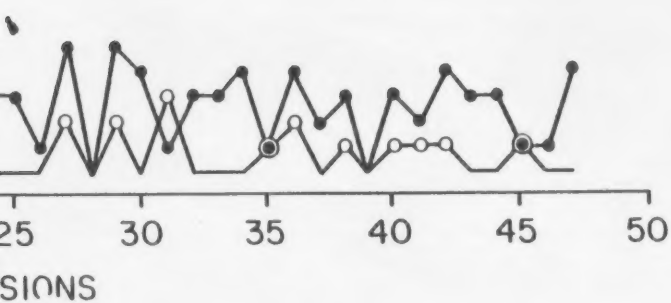
The following graph describes Bonnie's work progress.

BONNIE - KITCHEN UTILITY





RBAL PROMPTS
 RBAL, GESTURE, MODEL OR PHYSICAL PROMPT(S)



Bill

Bill is a 26-year old retarded male who is verbal and lives at home with his father. Previous to attending the Henrico Adult Services Center he worked for a year at Goodwill Industries. He was eventually laid off from Goodwill.

Bill's verbalizations are difficult to understand and he drools periodically. He also requires training in eating with his mouth closed. No IQ was available although Bill was functioning in the moderate retardation range.

Project Employability staff placed Bill into an extended nonpaid training position in the University of Richmond main cafeteria. As a kitchen utility worker his job requires all aspects of cafeteria clean-up. This includes dishroom work such as scraping and rinsing dishes, loading and unloading the dish machine and proper dish stacking.

Bill's training required frequent trainer prompts and reinforcement. He was only recently hired and will be re-evaluated in two months. Bill demonstrated the ability to learn each new task more quickly over the weeks of training.

The data below is primarily for Bill's nonpaid training period.

Previous Rehabilitation Status: Considered too difficult for counselor caseload.

Date Hired: March, 1979

Absence and Tardiness: None

Percent of Time on Task: 91.1%

Average Frequency of Prompts: .55 Verbal prompts per session
.34 Gesture or physical prompts per session

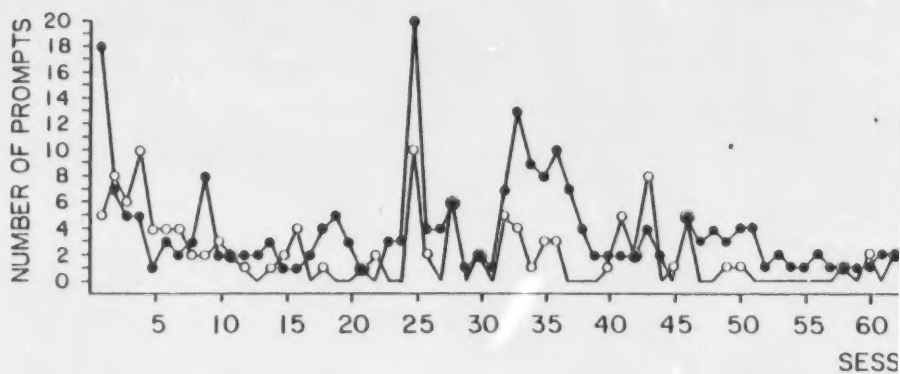
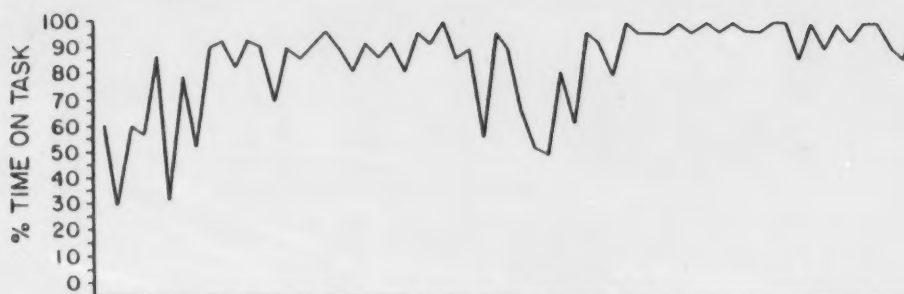
Total Wages: \$173

Comprehensive Fringe Benefits: No

Supervisor Evaluations: Positive

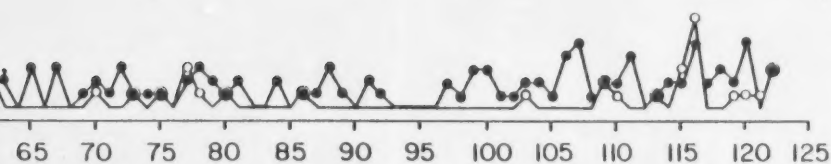
The graph on the following page indicates Bill's progress.

BILL - KITCHEN UTILITY





- VERBAL PROMPTS
- GESTURE, MODEL OR PHYSICAL PROMPT(S)



IONS

Jenny

Jenny is a 34-year old moderately retarded female who lives at home. Jenny had been employed at Goodwill Industries for several years before being laid off and sent to the Henrico Adult Services Center. She is overweight yet social and outgoing.

Jenny received training in basic kitchen utility skills before being placed into extended nonpaid training in the University of Richmond's main dining room. Her responsibilities are to bus and clean tables, break down trays at the dish table and pick up large trash from floors. The Line Runner assignment involved keeping silver, dishware, and trays stocked and to keep equipment and counters clean. She also served students who came through the line between one to four food types.

After several weeks, it was evident that Jenny could do most of the jobs capably. Project Employability staff collected data on her progress throughout the training period. Jenny should have been hired sooner than she was except that no positions were available at the cafeteria once her training was completed. The data below indicate her work progress:

Previous Rehabilitation Status: Considered too difficult for counselor's caseload

Date Hired: March, 1979

Absences and Tardiness: None

Percent of Time on Task During Training: 96.3%

Average Frequency of Trainer Prompts: 2.28 Verbal prompts per session
 .75 Gestural or physical prompts
 per session

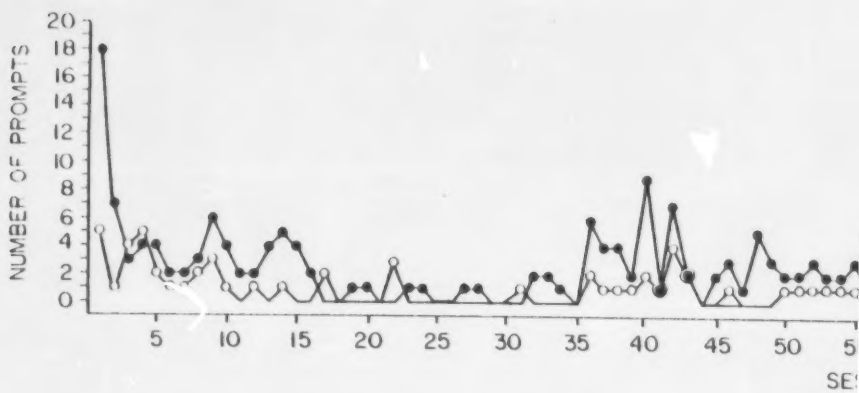
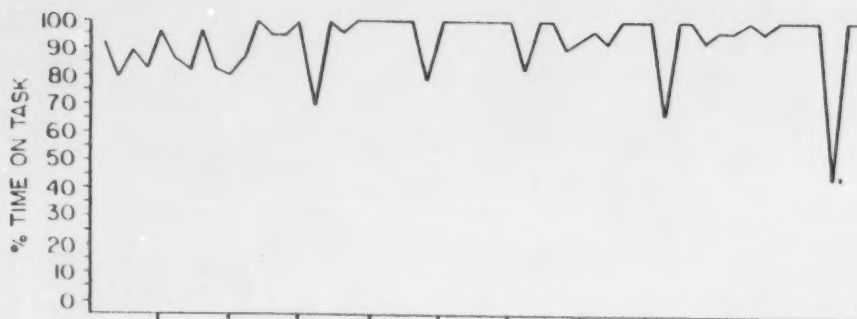
Total Wages: \$170

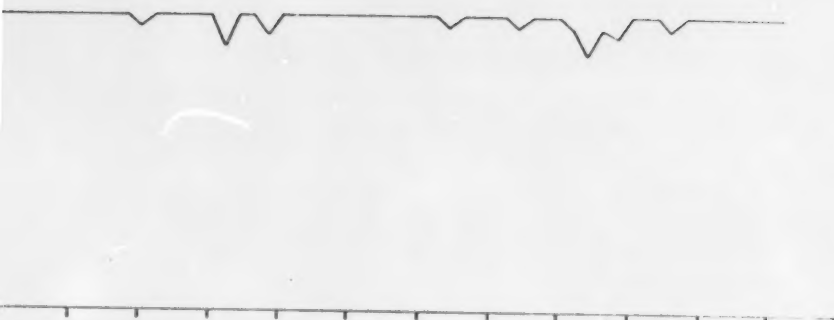
Comprehensive Fringe Benefits: Yes

Supervisor Evaluations: Positive

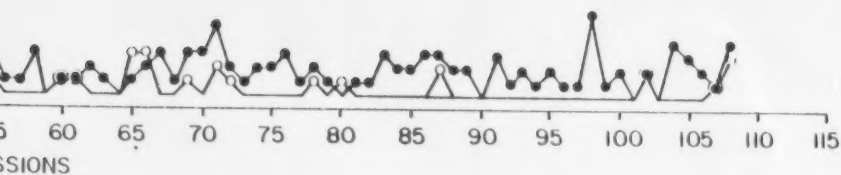
The following graph describes Jenny's work progress.

JENNY- KITCHEN UTILITY





- VERBAL PROMPTS
- GESTURE, MODEL OR PHYSICAL PROMPT(S)



Sam

Sam is a 29 year old man who was born with hydrocephaly. His records state evidence of chronic brain damage; but, little regarding his level of intelligence. He is verbal with good vocabulary; however, he exhibits an extremely poor short term memory. He is blind in the right eye, has a history of seizures, and he currently takes antidepressant medication. Other behavioral characteristics include some noncompliant behavior with female supervisors.

Sam has never held a job before and he had received little practical job training prior to the placement. He previously lived for two years in a farm-based communal program for retarded and mentally ill where he baked bread and wove baskets and rugs.

Project Employability placed Sam in a dish machine operator position at a nursing home near his home. He was placed on the payroll on his first day of training. His duties include scrubbing trays, loading and unloading dish washer, restocking dishes and silver, sweeping and mopping.

His training involves the use of verbal prompts in all aspects of the job but largely toward enabling him to remember where items belong. He requires close supervision during peak periods such as lunch hours.

Previous Rehabilitation Status: 28 - Services closed

Date Hired: March 19, 1979

Absences and Tardiness: Zero in two weeks of work

Average Percent of time on-task: 98% per session

Average Frequency of prompts: 5.5 verbal prompts per session/2.1 Gestures, models, or physical prompts per session.

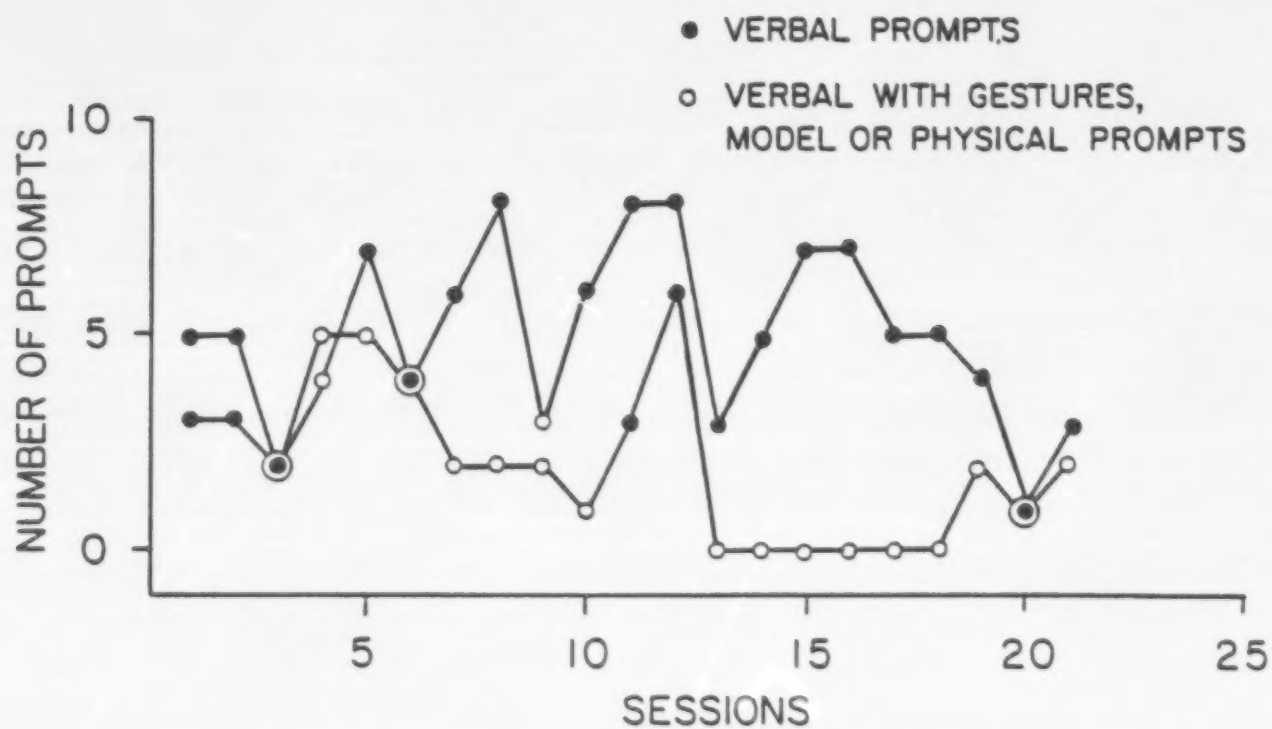
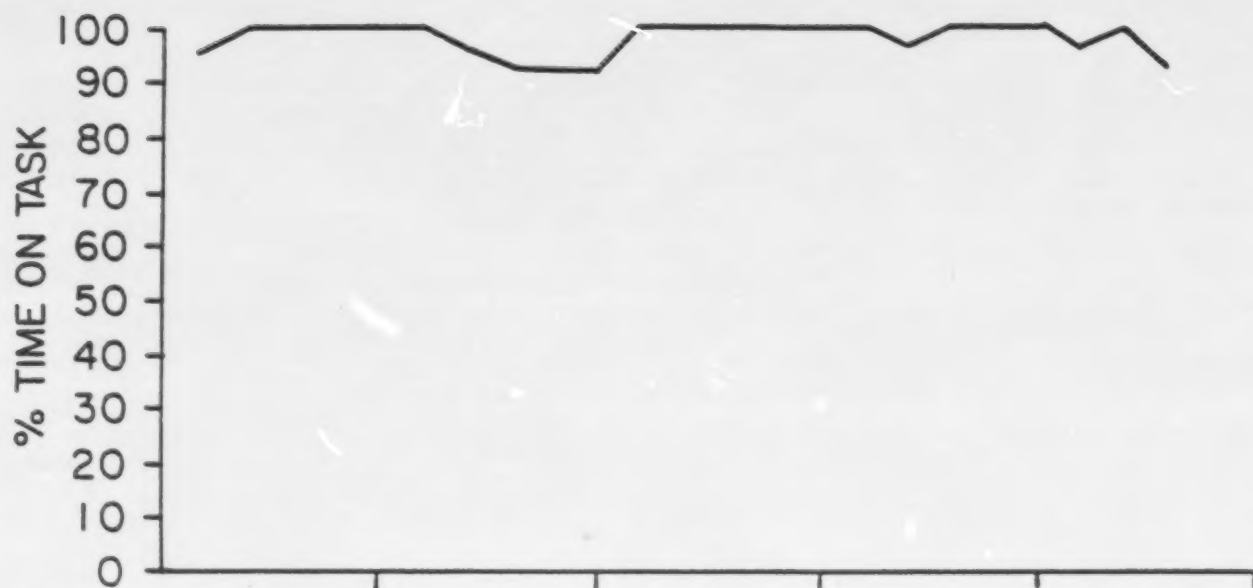
Total wages earned: \$138.00 for two weeks; five hours a day (Part-time).

Comprehensive Fringe Benefits: No (Part-time).

Supervisor Evaluation: Positive

The graph on the following page indicates Sam's progress.

SAM - DISH MACHINE OPERATOR



Jack

Jack is a 33-year old, profoundly deaf male who is classified as moderately retarded. Jack spent the majority of his life in a large state institution for the mentally retarded. He had been deinstitutionalized for approximately 20 days before he was referred to the Project.

Jack exhibits some unrefined sign language; however, he communicates largely through grunts and gestures. In addition, mild to moderate spasticity is evident with some accompanying involuntary movements. On occasion, Jack exhibits the non-compliant behavior of turning away from the trainer when his routine is altered.

Jack received some vocational training within the institution and apparently, he was placed on a one to two hour a day job at a night club while residing in the facility. However, no records of performance or earned wages have been received from the institution or rehabilitation staff to date.

Project Employability staff placed Jack in a one month nonpaid training position in the University of Richmond main cafeteria as a Pot scrubber. This job consists of preparing sinks and pots for wash, scrubbing pots, rinsing, sanitizing and putting items in their proper place. Related jobs included use of the garbage disposal, emptying trash, and sweeping and mopping sink area.

Jack's training consisted of the use of gestural prompts, modeling, physical prompts and some sign language, although Jack repertoire is limited in this area. Jack was reinforced with smiles, gestures and pats on the back for favorable job performance. When non-compliance occurs, all activity is halted until Jack complies with the trainer unless the supervisor or co-workers require an immediate response or task to be completed. Jack was recently hired after 4 weeks of training on a part-time basis.

The data below is primarily from Jack's nonpaid training period.

Previous Rehabilitation Status: 18-Ready for Work Adjustment Training
in a sheltered workshop.

Date Hired: March 26, 1979

Absence and Tardiness: Zero Absences; however, three times tardy due to bus training errors.

Percent of time on-task: 98.12%

Average Frequency of prompts: 3.64 Gestures, models, or physical prompts.

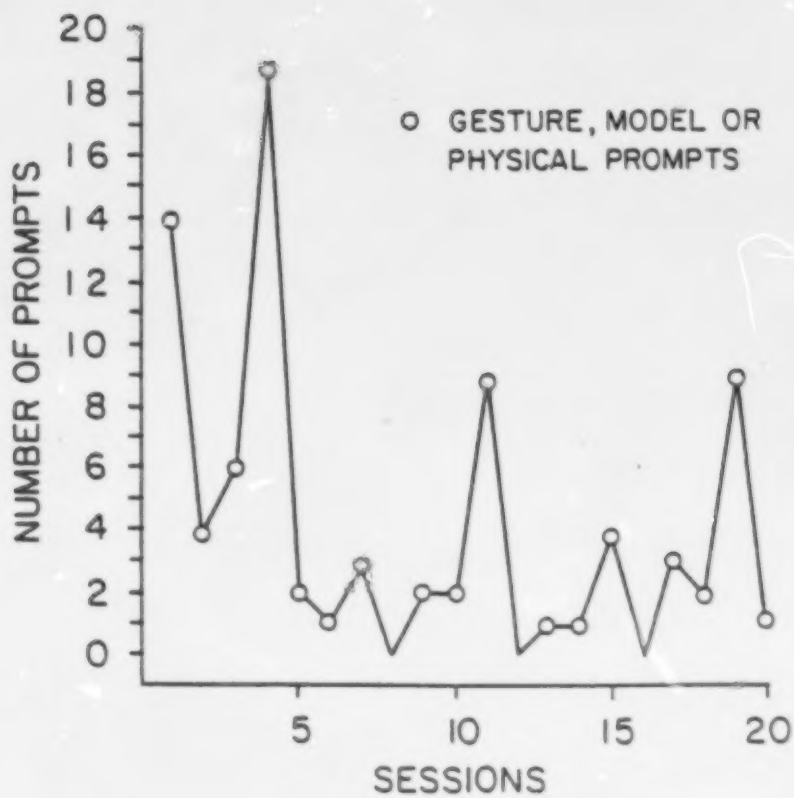
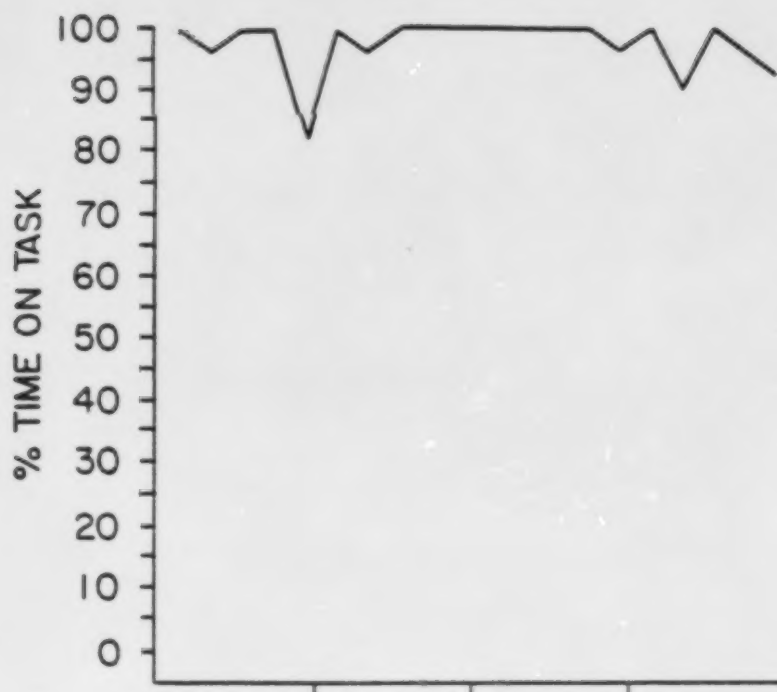
Jack - continued

Comprehensive Fringe Benefits: No

Supervisor Evaluation: Positive but some concern about involuntary movements.

The graph on the following page indicates Jack's progress.

JACK -
POT SCRUBBER



EVALUATION OF TWO SHAPING
STRATEGIES ON THE PRODUCTION RATES OF
MENTALLY RETARDED ADULTS

Janet W. Hill

Paul Wehman

Kala Kaminsky

Ruby Tipton

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Evaluation of Two Shaping Strategies
on the Production Rates of Mentally Retarded Adults

One of the more significant problems facing sheltered workshop supervisors is how to elevate the production rates of mentally retarded workers with a limited amount of staff. Many workshops and adult developmental centers serve dozens of clients yet have only a small handful of staff due to the continual demand for financial resources by different community agencies. The irony is that greater client productivity could lead to increased self-sufficiency in sheltered workshops thus reducing the need for subsidized funding.

There is already ample research demonstrating that mentally retarded workers can work faster and produce more if positive reinforcement, verbal prompts, tokens, etc. are provided (e.g., Bellamy, 1976; Karan, Wehman, Renzaglia & Schutz, 1976). What is lacking, however, is how to utilize limited workshop staff optimally; for example, given three staff members and 24 clients, 50% of which are very slow workers, how might production rates be accelerated and with the most efficient use of instructor time? Mithaug and Hagmeier (1978) echo this concern as they note, through a survey of sheltered workshops, the importance of clients working independent of staff supervision.

We believe that there are at least two major strategies which may be considered. Strategy one involves providing instructor attention only after the client performs a criterion number of units; albeit, the performance level to criterion may be quite attainable initially. Conversely, strategy two involves the continual presence of an instructor with one or more clients. The instructor delivers reinforcement and verbal prompts initially at a high

rate. Gradually the trainer's presence is decreased as the client meets the criterion. Although the criterion for reinforcement may not be altered, the need for on-going instructor presence is reduced.

In order to evaluate the impact of these supervisor management strategies, we undertook two programs with a total of four clients. Each strategy was assessed and different tasks were employed.

Program I: Shaping Production Through
a Changing Criterion
Reinforcement

Method

Subject & Setting. Mary is a 21 year old female who is classified as severely mentally retarded. Significant behavior characteristics included occasional toileting accidents, few meaningful verbalizations, and the use of one manual sign. Mary jiggled her clothing in a stereotypic fashion when not directly involved in work.

The program took place in a community-based program for mentally retarded adults and was located in a business section of town. Mary was assigned to the industrial unit of the program, a simulated workshop area, from 9:30 to 3:00 each day. She sat at a work table with one other client where she worked for four one-hour work periods daily.

Mary's job involved the assembly of a five piece ball point pen. Color discrimination was also involved in this fine motor task since the finished product had to have the same color base and barrel. A variety of colors were available for assembly and laid out in front of the worker.

Behavior Observation. The basic unit of measurement was rate or units completed per minute. The total number of units completed was divided by the total number of minutes worked.

Procedure. Initially, a baseline period of rate data was taken to assess Mary's level of production without any intervention from the supervisor. She was told only when to begin and when to stop working.

Mary's baseline data indicated very low rates of production without direct supervision. It was observed that she played with the assembly pieces. However, if the supervisor attended to her Mary produced units more rapidly. In order to avoid dependence on continued supervisor intervention and begin to shape self-initiated work behavior, the technique of differential reinforcement of high rate responding was utilized. This technique requires that a subject produce a specific number of units within a given time interval before receiving reinforcement. If the target number is not reached, then no reinforcement is delivered. Therefore, the number of units which are completed will have no reinforcement value unless the target number (criterion) is reached. The time interval used within this program was a period in which the client was semi-supervised and was expected to self-initiate work behavior. The supervisor did not provide continual prompts or continuous reinforcement and was not in immediate physical proximity to the client.

Since Mary's baseline data showed very low production rates, it was decided that her work behavior could be shaped by the selection of a five minute work interval in which she had to produce three pens (or the equivalent of .6 units per minute). Although, this criterion was far above the

baseline average, it was believed that even with minimal supervision that this criterion could be attained.

During this intervention phase, a timer was set for five minutes and three blank 5"x8" cards were set in front of her. She was told that if she placed a pen on each card before the bell rang, she would receive a token. This could immediately be exchanged for an edible which was visible to her throughout the interval. The supervisor then moved away from Mary to work with another client approximately five feet away. Initially, the supervisor gave frequent prompts if Mary was not working; however, only infrequent prompts were given after the intervention was in effect for three days.

Mary was given approximately a one minute break after each interval and the timer was reset for five more minutes. If she did not reach her target number the supervisor verbally expressed disapproval, explained the contingencies again and reset the timer.

Within this changing criterion design time intervals were increased from five minutes to eight minutes to 12 minutes and, finally, to 20 minutes. The target criterion rates were also increased gradually based upon Mary's success.

Table 1 shows the increases in time intervals and criterion rates. Much care was taken not to raise criterion rates too rapidly in that the major objective was to enable Mary to work independently at an improved rate rather than solely to increase production rate.

Insert Table 1 Here

Table I

Increases in work time intervals and target criterion rates for
Mary with minimal supervision.

Time Intervals	5 min. Interval		8 min. Interval	12 min. Interval	20 min. Interval
Target Criterion	.6 pens per minute	.8 pens per minute	.875 pens per minute	1.0 pens per minute	1.0 pens per minute

Results

Figure 1 indicates a rapid increase in production rates over baseline levels within the first environmental manipulation. More gradual increases in production are seen with each of the three subsequent increments in the target criterion and length of the work period. With the final increase in criterion to 1.0 units per minute for a 20 minute semi-supervised work period, production rates show a 950% increase over baseline levels.

Program II: Fading a Supervisor's Intervention with a Slow Worker

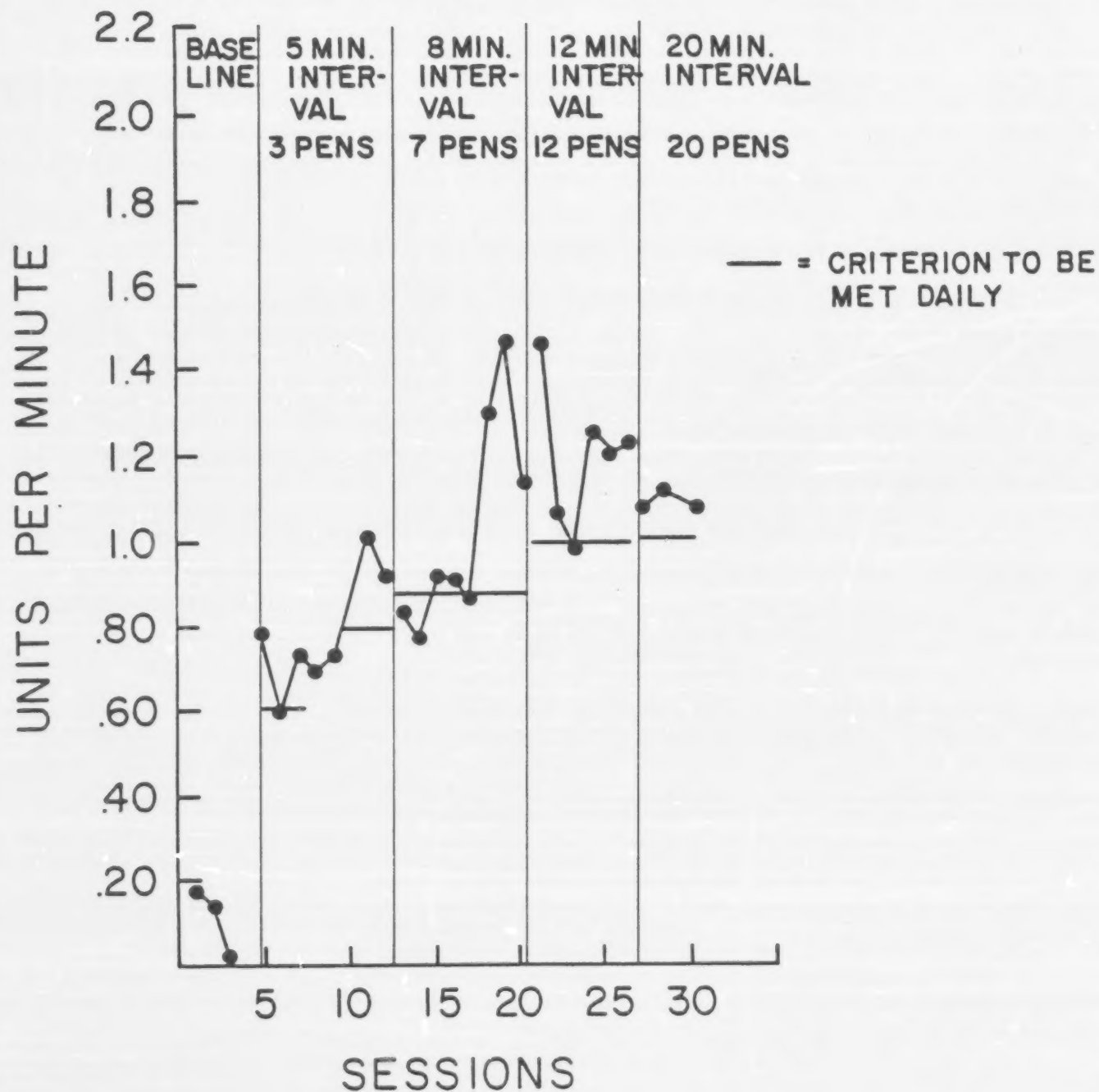
Method

Subjects & Settings. Three clients were selected for this program.

Sandy is a 28-year old, verbal female classified as moderately mentally retarded. Significant behavior characteristics included frequent crying episodes and complaints of a nervous condition that she said interfered with her work. Norman is a 21 year old male with cerebral palsy. This young man was classified as borderline mentally retarded to normal intelligence; however, he was confined to a wheelchair, had limited use of his hands, and a severe speech impairment. A third client, Jean, is a 22-year old female classified as severely mentally retarded. Significant behavior characteristics included few verbalizations, all of which were stuttered, and infrequent eye contact with others.

Sandy was assigned a task which required the collating of seven coupons in order and placing them in a photo envelope. Norman and Jean

MARY - INK PEN ASSEMBLY PRODUCTION



were responsible for sorting defective circuit breaker pieces, a four choice discrimination task.

All trainees attended the same program and adhered to the same daily schedule as did Mary. The three clients sat at two tables which formed an L. The supervisor sat facing them in a position in which she could interact with each client. All were exposed to four one hour work periods daily.

Procedure. Baseline data were collected on each client. The clients were told only when to begin and when to stop their work. Baseline production rates were established in the same way as in the first program.

While Program I demonstrated a technique to gradually shape independent work behavior through differential reinforcement and minimal supervisor interaction during work periods, the purpose of Program II was to investigate a technique in which maximum supervision was supplied until production rates reached an acceptable level. At that point, supervision was then systematically faded.

During the first intervention phase, the supervisor interacted with the three clients on a frequent basis during each one hour work period. One supervisor was assigned to them and sat facing all three clients. The supervisor provided verbal prompts, verbal and tactile reinforcement, and token reinforcement on a fixed ratio schedule. One token was delivered to Sandy for every two envelopes completed and one token was given to Norman and Jean for every five circuit breakers pieces sorted. In short, the supervisor supplied whatever was required to accelerate production among these persons.

These reinforcement procedures remained the same throughout the study; however, the physical proximity of the supervisor was systematically withdrawn for increasingly longer portions of time throughout each one hour work period. Individual target criteria had to be met across 3 consecutive days before supervision was withdrawn. Criteria are shown in Figure 2, 3, and 4.

 Insert Figure 2, 3, and 4 About Here

The phases of supervision fading were as follows:

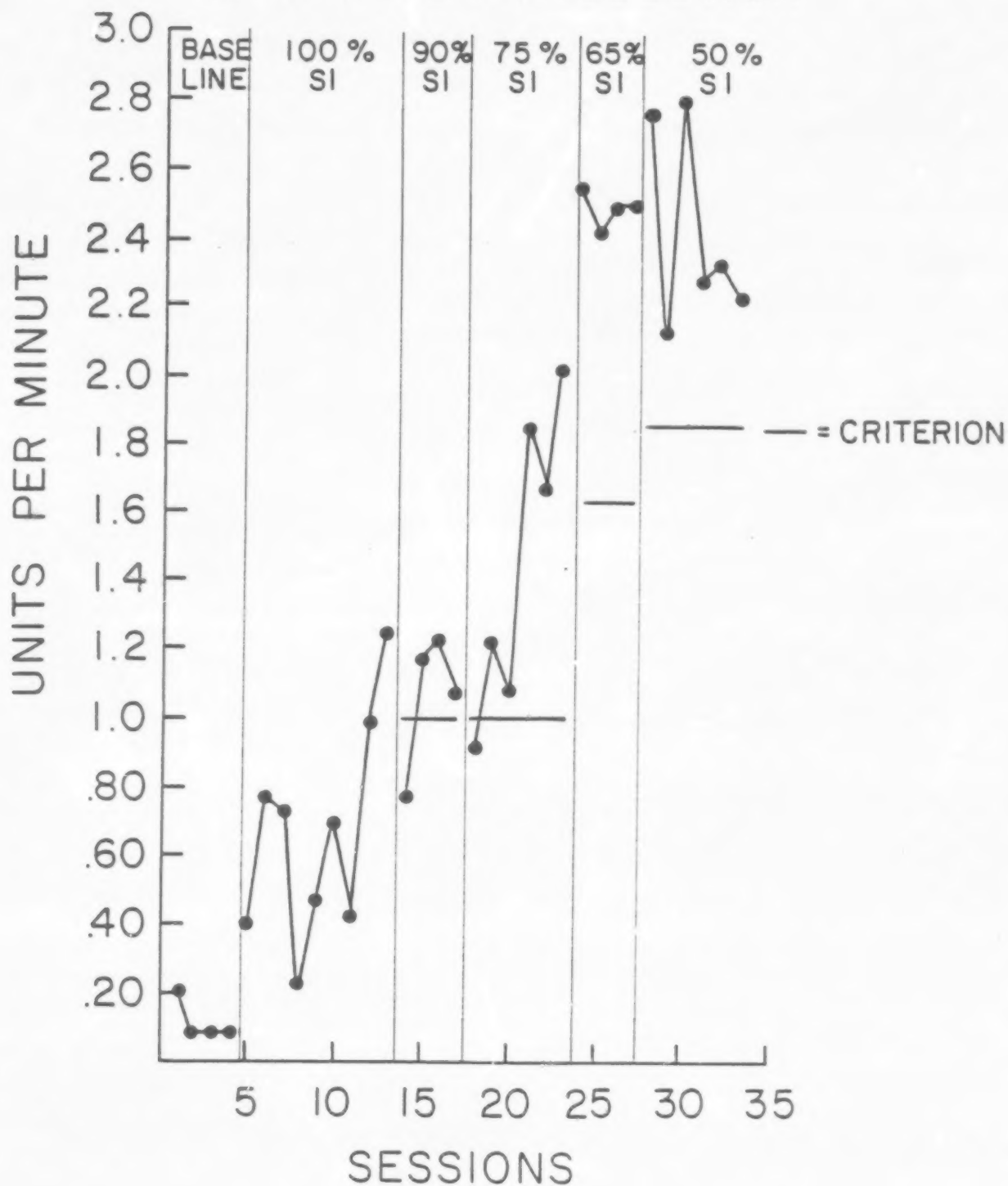
- Phase 1: 0% supervisor withdrawal (i.e., continual intervention as needed)
- Phase 2: 10 to 15% supervisor withdrawal (i.e., 6 to 9 min. out of a one hour work period = no interaction);
- Phase 3: 25% supervisor withdrawal (15 min. out of 1 hr.);
- Phase 4: 35% supervisor withdrawal (21 min. out of 1 hr.); and
- Phase 5: 50% supervisor withdrawal (30 min. out of 1 hr.).

Supervisor withdrawal constituted the supervisor leaving the work area completely and often being out of the visual range of the clients. The withdrawal period initially occurred in the middle of the one hour work period. As the program continued, however, they occurred at the convenience of the supervisor during the beginning, middle, or end of the work period.

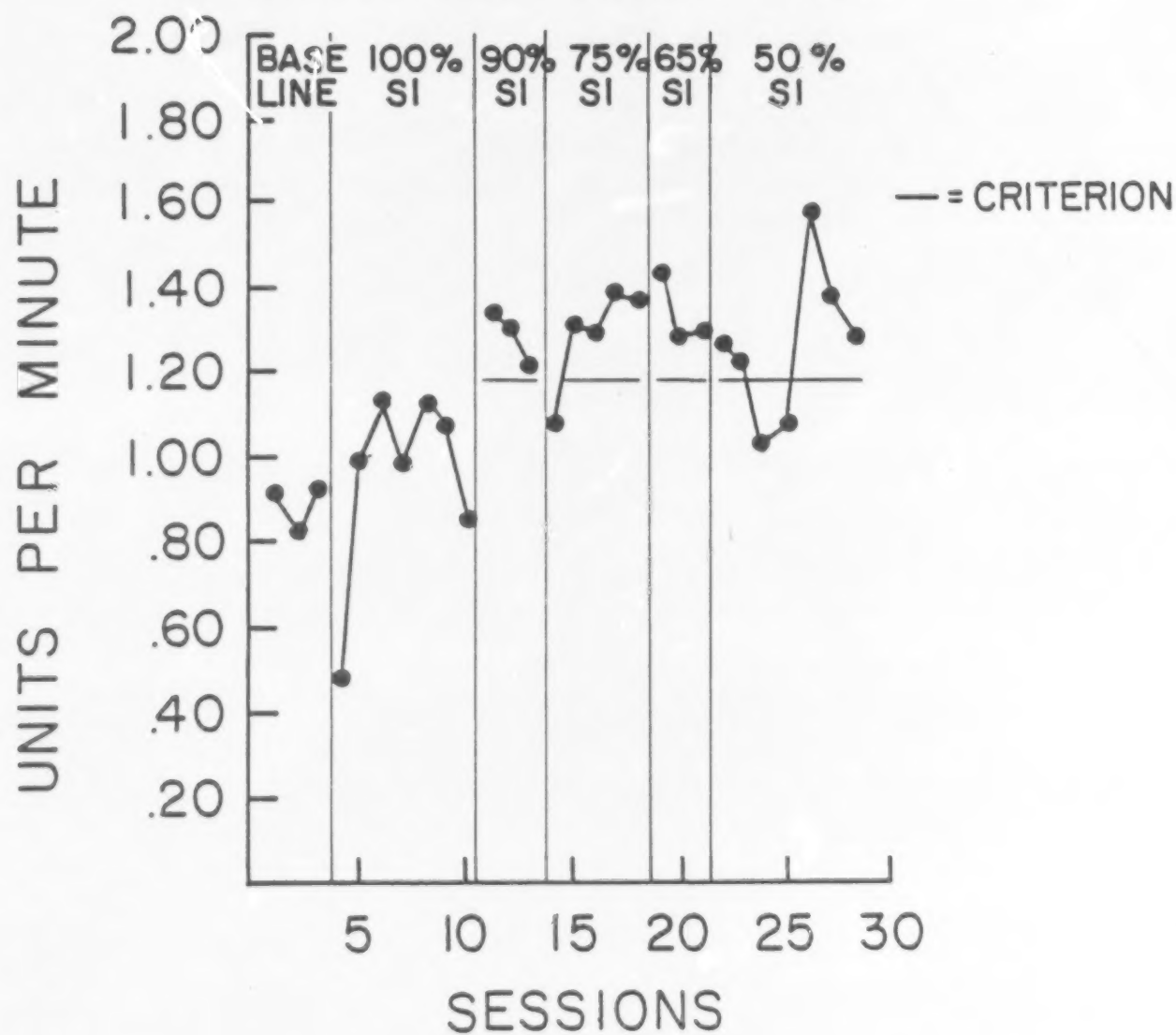
Results

Examination of Figures 2, 3, and 4 reveal increases in production rates under the first environmental condition (i.e., 100% S.I. = 100% Supervisor

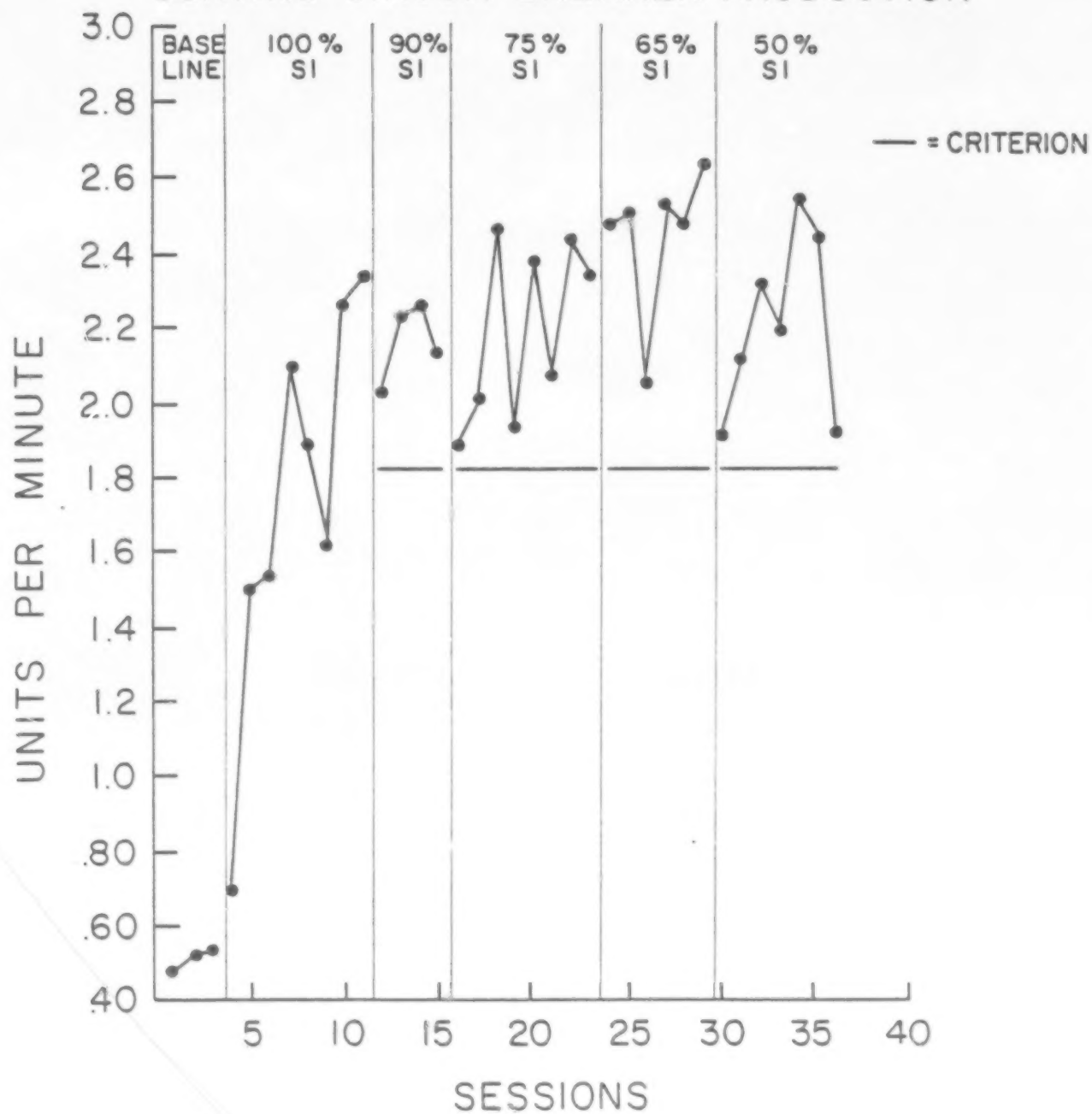
SANDY - PHOTO FLYER PRODUCTION



NORMAN - SORTING CIRCUIT BREAKER PRODUCTION



JEAN - SORTING CIRCUIT BREAKER PRODUCTION



Intervention) for all three clients; Figure 3, however, shows smaller gains and much variability in Norman's production rates under this first intervention phase. During each subsequent reduction of Supervisor Intervention (S.I.), higher production rates over baseline levels were not only maintained but steady gains are found for all three clients. Generally, it may be said that all subjects produced more units during the final phase with only 50% supervisor intervention; however, the effect of practice over an average of 25 days must be included in the examination of these results. Figure 3 of Norman's rate, the "normal" physically handicapped worker, shows less marked increases in production rates than seen for Sandy and Jean.

Discussion

The results of the present two programs lend support to the use of each of the techniques described to accelerate production among handicapped workers within a workshop unit. Perhaps, more importantly, the programs show that production can be increased among severely to moderately disabled persons without one to one supervision in that each technique provides staff with the capacity to work with more than one client.

Mary, the client selected for the programs utilizing differential reinforcement of high rate (DRH) production was the lowest functioning client within the unit and produced the least work units. Therefore, initially small time intervals had to be selected for work periods in order to insure more opportunities for reinforcement. With higher functioning persons, longer initial work periods may be established. The simple contingencies implemented for the first intervention phase, produced marked increases in Mary's work

rate and an immediate opportunity for her to experience success. With the gradual increases in the target criterion and the length of the work period, it was found that Mary was producing at one half of standard during 20 minute minimally supervised work periods after only 35 days.

The second technique described as maximum supervisor intervention with gradual fading of supervision required more direct staff time although the supervisor did work with three clients. In addition, this technique produced more gradual initial increases in production than the first technique; however, because continued steady increases were present even with the withdrawal of the supervisor, this technique remains a viable method to accelerate production in a workshop unit with limited staff.

It is of interest to note that Norman's production rate did not show as marked an increase as the other two clients in Program II. In fact, during the first intervention phase (100% supervisor intervention), Norman's rate on occasion fell below baseline levels. Norman's rate increased and stabilized as the supervisor's intervention was decreased. This may indicate that due to the limited arm/hand use of this client, he may have experienced some frustration and actually did not perform to his capacity with the supervisor's continual prompting and observation in the early stages of the Program.

The present study indicates that different acceleration techniques should be selected for individual clients based upon the desired results and client-specific characteristics as well as the staff constraints of the program.

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USE OF CLIENT ADMINISTERED REINFORCEMENT TO FACILITATE
INDEPENDENT WORKSHOP BEHAVIOR IN TWO MENTALLY RETARDED ADULTS

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Use of Client Administered Reinforcement to Facilitate
Independent Workshop Behavior in Two Mentally Retarded Adults

In many sheltered workshops employees receive a paycheck once a week. This arrangement is similar to competitive employment and the real world. Yet mentally retarded employees will often perform at a faster rate if reinforcement is provided more frequently than once a week. Unfortunately, to provide regular reinforcement throughout the day is expensive in staff time and, in most cases, simply impossible because of the very high ratio of employees to supervisors.

Therefore, in order to improve productivity of the workshop, thereby increasing the shop's self-sufficiency as well as the employee's take home pay, a more efficient reinforcement strategy must be considered. One possible strategy which has been utilized before on a limited basis is involving the client in the reinforcement delivery process (Kazdin, 1971). It has been found in other studies that production rates under supervisor or client administered reinforcement are roughly equivalent (Helland, Paluck, & Klein, 1977; Wehman, Schutz, Bates, Renzaglia, & Karan, 1978).

The purpose of this paper is to report two case studies which describe programs aimed at involvement of mentally retarded clients in the administration of token reinforcement to themselves for increased production. The instructional sequence required initial intervention by a supervisor until work rate improved. Eventually the clients were taught to reinforce themselves on an intermittent schedule. One of the case studies also involved an individual who exhibited a high rate of bizarre verbal behavior.

Program IMethod

Subject & Setting. Mathew is a 27 year old man with Down's Syndrome. He is classified as moderately mentally retarded. Matt had received 12 years of special education but had never worked or attended a workshop. He was verbal and had consistently exhibited compliant behavior during his one year of attendance at the current program location. However, Matt's work rate was consistently very slow and far below standard.

This program took place in an industrial unit within a local Adult Activity Center; the unit simulated the appearance of a sheltered workshop. Work tables were arranged with one or two individuals at each table. The clients worked in the unit from 9:30 until 3:00 Monday through Friday.

Matt was responsible for assembling photo envelopes containing seven ordered coupons. He was instructed to collate the seven coupons in order, straighten the edges and stuff them into the photo flyer envelopes. Four one hour work periods occurred each day. This task was performed at the local sheltered workshop.

Procedure. The techniques used to accelerate Matt's production were evaluated through a modified reversal design. The phases of the study included:

- 1) Baseline Period
- 2) Supervisor Intervention
- 3) Return to Baseline
- 4) Supervisor Intervention
- 5) Self-Delivered Reinforcement

Baseline. Matt's baseline level of production was assessed for six days. Rate data were established by dividing the total number of units completed by the total number of minutes of work.

Supervisor Intervention. During this phase, the supervisor was in close physical proximity to Matt's work table throughout the work period. Verbal prompts, verbal reinforcement, and one penny token for every two units completed were delivered continually. At the end of each work session, the client traded all tokens for items of his choice. The menu of items included after-shave lotion, disposable razors, small notebooks, gum, etc. This phase lasted a total of eight work days.

Return to Baseline Procedures. Procedures in this phase were identical to the initial baseline for a three day period. The client was told to begin work and to stop at the end of the work period. No further prompts or reinforcement were delivered.

Supervisor Intervention with Modified Reinforcement Schedule. This phase included the supervisor's delivery of one token for every five envelopes completed. Verbal reinforcement preceded the dispensement of tokens. This phase was continued for four days.

Self-Delivered Reinforcement. In this phase, one out of every five envelopes was marked with a green dot. When Matt completed an envelope with a green dot, he was instructed to pay himself one token from a container located in front of him. This constituted a variable ratio schedule of reinforcement for approximately every five units completed (VR-5). In essence, this was the same schedule of reinforcement used in the previous phase; however, during this phase, Matt delivered the reinforcement. At the end of the work session,

Matt traded his tokens. The supervisor's physical proximity was within 10 to 20 ft. of the worker; however, she did not directly interact with Matt during work periods except to supply more materials or to give occasional verbal approval for rapid work. The schedule of reinforcement was then thinned to a variable ratio of one token for approximately every eight units completed.

Results

Figure 1 reveals steady gains in work production and the attainment of high rate production during the first intervention phase. During the return to baseline procedures Matt's production rate dropped markedly but remained well above pre-program levels. Within the second supervisor intervention phase, production rate was increased to previously attained high levels and remained stable. With the introduction of self-reinforcement this stable production rate was maintained and a trend of slightly increased production emerged as the schedule of reinforcement was thinned in the final self-reinforcement phase. The average work rate during the second supervisor intervention phase was 1.73 while the average units per minute completed in the self-reinforcement phase was 1.85.

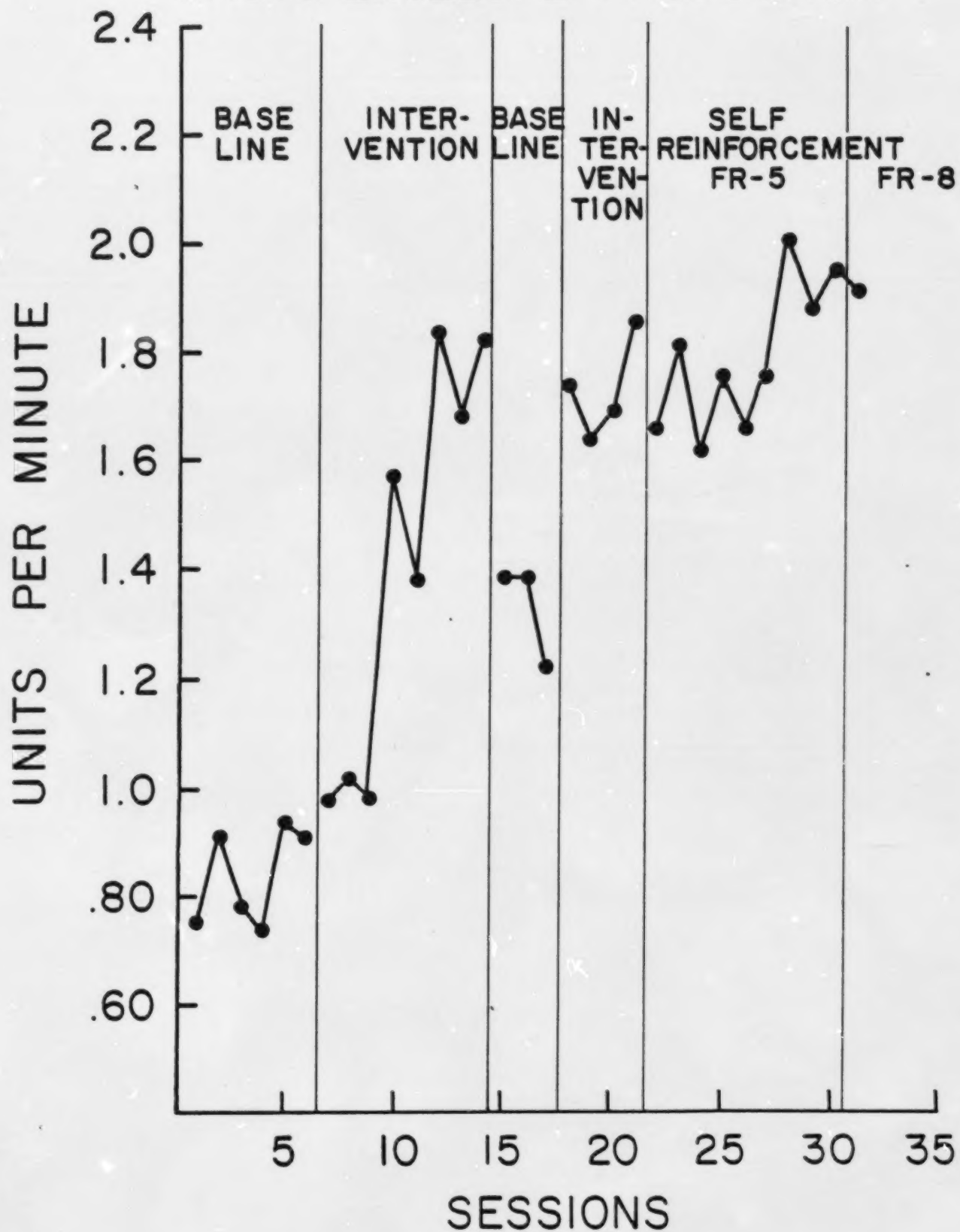
Program II

Method

Subject & Setting. Nick is a 31 year old male whose records stated evidence of chronic brain damage with an I.Q. of 54 on the Revised Beta I.Q. Test. He was committed to the State Hospital for the Mentally Ill at the age of 13

MATT -

PHOTO ENVELOPE PRODUCTION



and was classified as mentally ill and mentally retarded. He remained in the hospital for 17 years at which time he was returned to the community to live with his mother. At the time of this study he had been deinstitutionalized.

During this program Nick exhibited behaviors which interfere with his ability to work effectively and which were extremely disruptive to other workers. These behaviors included belching, talking out, and blowing on the valve body of the boiler drain he was to assemble to produce a shrill whistle sound. These behaviors were defined as noise-making behaviors and frequency records were collected during all work periods. The frequency of these behaviors throughout the study is shown in Figure 2.

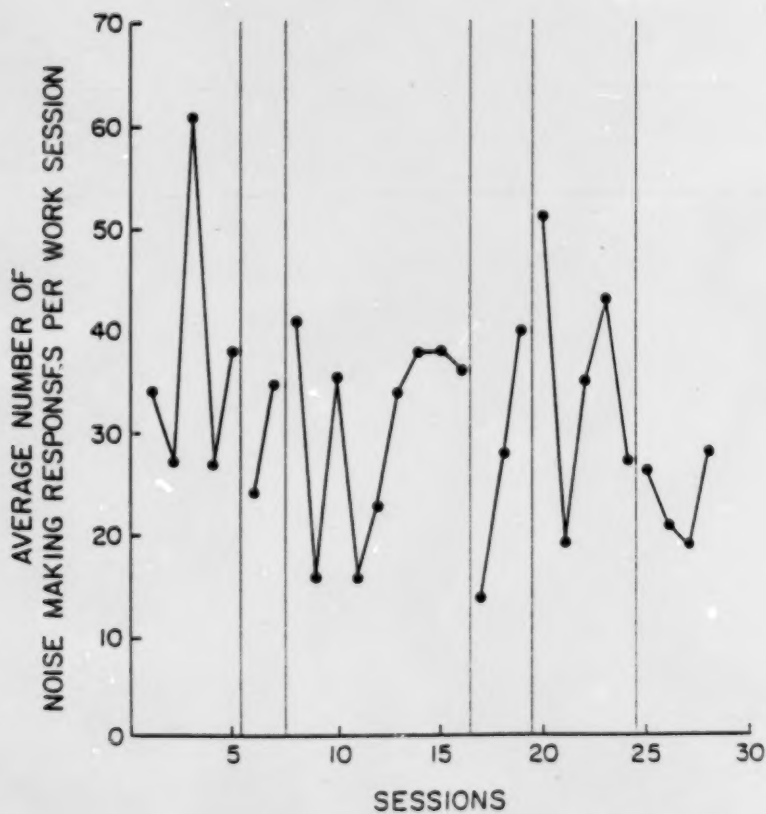
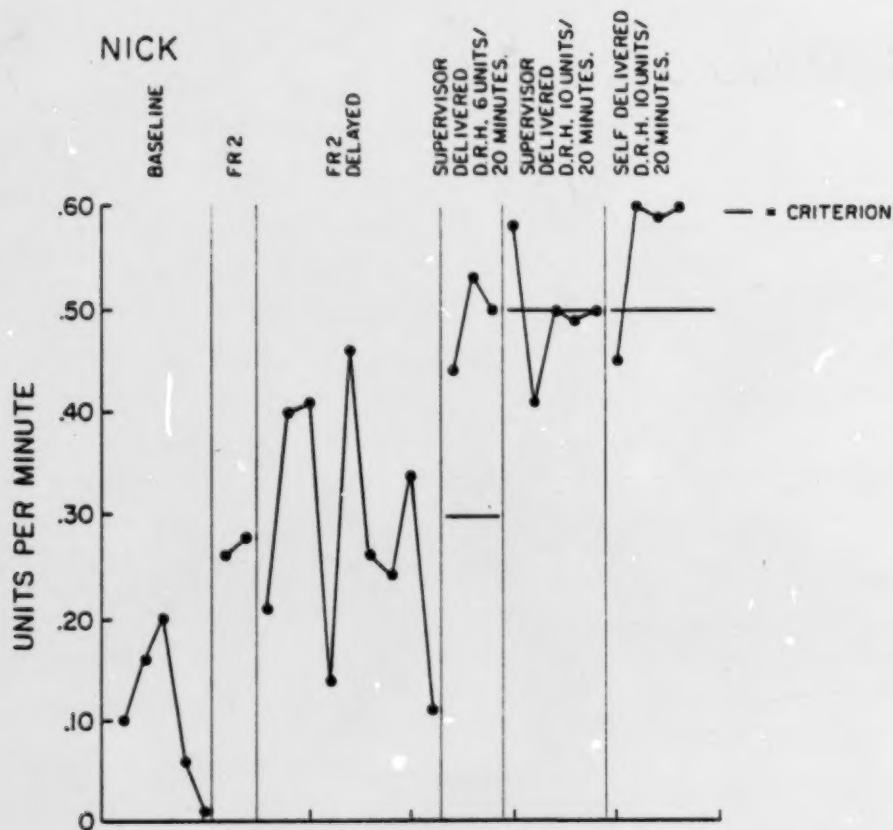
 Insert Figure 2 About Here

Initially, Nick refused to even sit at his work table. His behavior within the program, in general, was defined as non-compliant as well as disruptive by the staff who had worked with him for two years.

Nick attended the same program and adhered to the same schedule as Matt. He also was seated at a table by himself.

Nick was assigned a relatively complex task of assembling individual boiler drains. These drains were composed of seven parts including one handle, one actuating rod, one washer, one valve body, two threaded body couplings, a bushing, a packing nut, and two screws. Each of these parts were placed in separate containers on the table in front of him. He was

NICK



to assemble the seven parts of the boiler drain and place the completed product in a box.

Procedure. Baseline data were collected for a period of five days. During baseline Nick was told only when to begin and stop assembling boiler drains with no verbal prompts or reinforcements from the instructor during the work session. A frequency count of noise making behavior was also obtained during this phase as well as all other phases. Noise making behavior was defined as any verbalization or action producing a sound which was not in question form to the supervisor. If the noise was more than two seconds in duration it was counted again. If the noise lasted more than four seconds it was counted a third time and so on. Most noises lasted only one second.

Inasmuch as Nick's production rate showed considerable variability and he was resistant to attempts to increase his production, a number of different training procedures were attempted. In addition, a variety of reinforcement strategies had to be examined. Intervention strategies used were as follows:

- 1) Supervisor-delivered reinforcement during the one hour work period.
- 2) Supervisor-delivered reinforcement after the one hour work period.
- 3) Supervisor-delivered differential reinforcement for high rate production after a 20 minute work period.
- 4) Self-delivered differential reinforcement for high rate production after a 20 minute work period.

A changing criterion design was utilized to evaluate the program and to avoid the disruption which would have occurred during a reinforcement of baseline procedures. These phases are described below.

Supervisor-delivered reinforcement during the one hour work period.

In this phase, the supervisor delivered verbal prompts, praise, and one penny for every two units completed. The supervisor experimented with different methods of dispensing the pennies (on table, on cue form, etc.); however, each method resulted in Nick throwing the pennies across the room. Different types of reinforcement were also examined such as free time, music, cards, edibles; however, sweets, a highly desired item, could not be used due to a pre-diabetic condition. A criterion of 10 units in 60 minutes was set for Nick. As this did not significantly alter Nick's behavior, work rate, a second phase was initiated.

Supervisor-delivered reinforcement after one hour work period. Since the presence of tokens during the work period appeared to distract Nick, the supervisor began giving one token for every two units completed after the work period. The criterion of 10 units per 60 minutes was again set. Nick began refusing to work during this phase; therefore, the length of the work session was examined as a variable which could be manipulated.

Supervisor-delivered differential reinforcement of high rate production.

During this phase Nick was told he would only have to work for a 20 minute period at a time but he would have to produce six units in order to receive his reward. During the previous phase, he had elected to work for money (pennies); therefore, in this phase, Nick received three pennies for six units completed before a kitchen timer rang at the end of a 20 minute interval. Nick received no

pennies if he did not complete at least six units. After a short break and the payment of tokens, the timer was again set for 20 minutes and the same contingencies were in effect.

Following three days under these procedures the criterion was raised to the production of 10 units in 20 minutes before Nick would receive any pennies. He received five pennies for ten units (one penny for every two units). In that, at least minimal stimulus control seemed to be established, self-delivered reinforcement contingencies were introduced.

Self-delivered differential reinforcement for high rate production. The contingencies within this phase were identical to the one previous; however, the client was told he must set his own timer for 20 minutes and pay himself when the bell rang if he had completed 10 units. He paid himself one penny for every two units, if and only if he completed the initial ten.

Results

Examination of Figure 2 shows production rate and frequency of noise making responses across all sessions. No direct strategies were put in effect to reduce noise making during any phase of the program. Noise making responses were simply counted during each work period.

Figure 2 shows little gain in production rate until differential reinforcement of high rate (D.R.H.) production was introduced during 20 minute work periods. Nick's production rate increased nearly 100% during the supervisor-delivered and self-delivered D.R.H. schedules over the previous intervention attempts. With the introduction of self-reinforcement in the final phase increases in production rate were maintained.

The graph of noise making response frequency shows that Nick consistently exhibited a high rate of variability in this behavior throughout the program although the frequency appears lower more often during D.R.H. schedules of reinforcement.

Discussion

The results of the present two programs lend support to the use of self-delivered reinforcement for maintaining and accelerating work production among mentally retarded workers. This strategy relieves the drain on staff time required with reinforcement techniques and more closely approximates the reinforcement contingencies which exist in industry than does continual supervisor reinforcement. In the case of Nick, this program also indicates that the manipulation of other variables within the work environment may also need to be addressed to provide incentive to non-compliant workers. Variables such as the length of the initial work period, the target criterion and type of reinforcer, all appeared to have strong effects on Nick's work rate, although manipulation of variables did not reduce the inappropriate verbal behavior in a consistent way.

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DEVELOPING JOB INTERVIEW SKILLS IN
MENTALLY RETARDED ADULTS

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Developing Job Interview Skills in Mentally Retarded Adults

Securing a job is often contingent on the success of the initial meeting between a potential employee and employer. Demonstrating appropriate job interview behaviors may have a critical influence on whether a job offer is forthcoming. This is as true for handicapped workers as it is for nonhandicapped individuals. Although the quality and depth of interview will probably be directly related to the importance and/or complexity of the job, it is likely that in all successful interviews potential employees exhibit similar prosocial behaviors.

For example, an analysis of a positive interview yields at least three major classes of behavior which are generally considered to be appropriate. These include:

1. Understandable means of communication with
correct responses to typically asked questions
i.e. "Do you want a job?"
2. Appropriate prosocial behavior i.e. positive
affect; handshake
3. Appropriate visual orientation & posture, during
interview

Serious or consistent breakdowns in these clusters of behavior may suggest to an employer that the individual might lack the interpersonal skills to get along with co-workers.

When preparing mentally retarded individuals for work in competitive

employment it is especially important that job interview instruction be provided. Adequate job capabilities may not be sufficient to gain employment if the individual interviews poorly.

Below are listed several behaviors which might discourage an employer from hiring a mentally retarded client:

- picking nose during interview
- consistent lack of eye contact
- failure to respond to outstretched hand
- inappropriate or bizarre giggling when asked question
- failure to answer correctly personal questions, e.g., one's name, due to lack of knowledge

The program reported in this paper describes the development and implementation of a data-based job interview program used with four moderately mentally retarded adults who were also involved in a job training program. Before being placed in the field on a specific job, such as kitchen utility work, the trainee had to attain a competence level in the job interview program. This program was viewed as an important prerequisite to eventual employability.

Method

Setting. All clients were attending a community-based adult services center which received program direction and staff support from Project Employability, a three-year job training and placement program supported by a grant from Virginia Department of Rehabilitative Services.

Baseline and instructional phases took place in a large staff office

which was set-up to simulate a job interview area. All interviews were conducted under as formal conditions as possible with the instructor introducing herself as Ms. Johnson who purported to have an opening within her company.

Generalization phase interviews were conducted at the office of a Special Education professor of a local university and in the office of the County Mental Retardation Director.

Clients. Four clients were included in this study. All clients were verbal and all had previously been institutionalized. Years of institutionalization ranged from 7 to 18 years. John was a 52 year old male with Down's Syndrome and a moderate speech impairment. A recent psychological evaluation yielded an I.Q. of 53. John had no previous work history. Mike was a 26 year old male with a severe speech impairment and a tested I.Q. of 51. Significant behavior characteristics included some verbally abusive behavior, a high frequency of noncompliance, and an occasional refusal to speak to others. Mike had worked briefly in a sheltered workshop within the institution before coming to the community program. Mildred was a 25 year old female with a recorded I.Q. of 45. She also exhibited noncompliant behavior and aggressive outbursts approximately twice a week prior to the development of the program. She also had worked in the institution's sheltered workshop area. A fourth client, Anne, was a 28 year old female with an I.Q. of 53. She presented no behavior problem and exhibited good social behavior; Anne had no previous work history.

Program Sequence. The rationale for the program was based on the need to

train clients in the basic set of behaviors required to make a positive impression on an employer. Four major behavior clusters were identified by staff as types of skills which would make a good impression on employers. These are as follows:

- 1) a handshake and a greeting;
- 2) eye contact or proper eye orientation with the interviewer;
- 3) appropriate language, or answers for common interview questions; and
- 4) three types of good posture variables.

Table 1 provides a sample Data Sheet showing the skill sequence utilized.

Insert Table 1 About Here

Selection of skill areas was based on actual staff experience from participation in job interviews with clients who had previously been placed in a job. The preemployment job interview program was developed and implemented so that staff involvement would be minimized during real interviews with employers.

Behavior Observation. During the baseline phases, each client entered the interview room alone and their performance was rated on each of the 55 program responses shown in Table 1. During the instructional phases, however, all clients remained in the interview room together while each in turn received

Table 1
JOB INTERVIEW PROGRAM DATA SHEET

CLIENT NAME _____

JOB INTERVIEWER

Scoring Keys: In the Handshake, Orienting, and Posture categories, record a plus or minus according to the defined criteria.

Language:

4 = approp. short answer, good volume

3 = approp. short answer, low volume

2 = inapprop. answer, good volume

1 = inapprop. answer, low volume

0 = no response

DATES

I. HANDSHAKE

1. Extends hand to interviewer's hand.
2. Squeezes hand firmly.
3. Orients to interviewer.
4. Responds to greeting appropriately.
5. Lets go of hand when interviewer does.

II. INTERVIEW

Q: "How are you?"

6. Orients
7. Language
8. Legs and feet appropriate.
9. Head and back appropriate.
10. Arms appropriate.

Q: "What is your name?"

11. Orients
12. Language
13. Legs and feet appropriate.
14. Head and back appropriate.
15. Arms appropriate.

(CONTINUED)

JOB INTERVIEW PROGRAM DATA SHEET (continued)

DATES

Q: "Would you like to have a job?"

16. Orients

17. Language

18. Legs and feet appropriate.

19. Head and back appropriate.

20. Arms appropriate.

Q: "Could you work
8 hours a day?"

21. Orients

22. Language

23. Legs and feet appropriate.

24. Head and back appropriate.

25. Arms appropriate.

Q: "Have you ever worked before?"

26. Orients,

27. Language

28. Legs and feet appropriate.

29. Head and back appropriate.

30. Arms appropriate.

Q: "What have you been trained to do?"

31. Orients

32. Language

33. Legs and feet appropriate.

34. Head and back appropriate.

35. Arms appropriate.

(CONTINUED)

JOB INTERVIEW PROGRAM DATA SHEET (continued)

DATES

Q: "How will you get to work?"

36. Orients

37. Language

38. Legs and feet appropriate.

39. Head and back appropriate.

40. Arms appropriate.

Q: "Could you work on weekends?"

41. Orients

42. Language

43. Legs and feet appropriate.

44. Head and back appropriate.

45. Arms appropriate.

Q: "Could you work part-time?"

46. Orients

47. Language

48. Legs and feet appropriate.

49. Head and back appropriate.

50. Arms appropriate.

Q: "Can you work fast?"

51. Orients

52. Language.

53. Legs and feet appropriate.

54. Head and back appropriate.

55. Arms appropriate.

TOTAL +'s:

(Only a 4 is to be considered a "plus" in the Language category)

10-15 minutes of instruction, followed immediately by a posttest on each of 55 program responses. Inter-rater reliability was computed for baseline and instructional phases. One additional observer sat directly beside the interviewer and data were collected simultaneously. Reliability was established after each check by dividing the number of agreements by the total number of observations. Reliability coefficients ranged from 1 to .84 after 3 days of rater training.

After a formal interview situation was simulated at a desk with a side chair, the interviewer stated "Mary, we are going to practice having a job interview. Let's say I am an employer with a job opening in my company and you would like to interview for this job. I want you to make a good impression on me.... Let's start from the beginning. Hello, I am Ms. Johnson...." The sample data sheet found in Table 1 shows that all interviews, whether in baseline or instructional phases, began with a handshake and greeting. Upon entry of the client to the area, the interviewer initiated the handshake and greeted the client. Following this process the interviewer (and the rater) then immediately recorded a plus or minus for the person's performance in this area according to the criteria found in Table 2.

 Insert Table 2 About Here

After data were recorded on Part I, the interviewer began the interview questions. Part II of the recording sheet shows that five responses were examined during each of the interview questions in the following sequence:

- 1) eye orientation during the question;

Table 2

Guidelines for the Handshake and Greeting Rating:

<u>Item</u>	<u>Criterion</u>
1. Extends hand to interviewer's hand	1. Did client readily and independently extend his hand to the interviewer's extended hand within one second?
2. Squeezes hand firmly	2. Did he grasp interviewer's hand or simply place his hand in interviewer's?
3. Orients to interviewer	3. Did he give eye contact for at least one second during the handshake or greeting?
4. Respond to greeting appropriately	4. Did he give an appropriate verbal response to the interviewer's greeting? ("OK" was not considered appropriate; "How do you do?" was considered most appropriate).
5. Lets go of hand when interviewer does	5. Did the client let go of the interviewer's hand after two shakes or did he continue shaking or holding the interviewer's hand?

- 2) the verbal response used to answer the question;
- 3) posture of legs;
- 4) posture of head and back; and
- 5) posture of arms/hands.

Orienting. A plus was recorded in the "Orients" column if the client visually fixated to the interviewer's facial area for at least one second while the interviewer was asking the question. In other words, the interviewer had to memorize the question, look at the client eyes while she stated the question, and assess whether the client oriented to her facial area. Since there are 10 questions, 10 ratings were collected on eye orientation during each interview.

Language. After eye orientation was recorded for a given question and client responded verbally to the question, the interviewer made a decision as to the level of appropriateness of the verbal response. Examples of appropriate answers were provided and may be found in Table 3.

Insert Table 3 About Here

A code from four to zero indicating the level of the answer was used on all language items to indicate smaller increments of progress throughout the instruction. This code may be found at the top of the sample recording sheet in Table 1. A level four was recorded if the answer to a given question was short, appropriate and spoken at good volume; a three was recorded if the answer was short and appropriate but low in volume or difficult to understand. A two

Table 3

Criterion for responding appropriately to interview questions: Short answers, good volume, and can be readily understood.

How are you?	Fine, thank you. Very good, thank you.
What is your name?	State full name (not middle name).
Would you like to have a job?	Yes, very much. I want to work.
Could you work 8 hrs. a day?	Oh, yes. I can work long hours. I am used to working long hours.
Have you ever worked before?	*Answer depends on client background. Yes, I worked at _____. No, but I have been trained to work, at the Adult Services Center.
What have you been trained to do?	Food service and custodial work.
How would you get to work?	Bus. I would arrange for a ride with my (family or counselor).
Could you work on weekends?	Yes, if that's what you need. Yes, Sir or M'am.
Could you work part-time?	Yes, but I prefer full-time. Yes, Sir or M'am.
Can you work fast, this is a busy place?	Yes, I work very fast.

was recorded for a long or inappropriate answer ("Yeah" was considered inappropriate) but if it was given at good volume. A recording of one was given for inappropriate or long answer and one that was difficult to understand or be heard. A zero was given for no verbal response (i.e., head nods were given a value of zero). The interviewer took as much time as needed to record the language code for each answer.

Posture. Immediately after the language code was written on the recording sheet, the interviewer looked up and at that moment (1 second) only, assessed the client's posture in terms of leg/feet position, head and back position and hand/arm position. These three posture aspects were assessed simultaneously. During inter-rater reliability checks, the interviewer used the code word "now" to cue the second rater as to the moment in which the time sampling of posture would occur. Since there are 10 interview answers required in the program and three aspects of posture were assessed simultaneously after each answer, a total of 30 posture ratings were gathered during each interview. The criterion for appropriate posture may be found in Table 4.

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Insert Table 4 About Here
- - - - -

Instructional Techniques and Program Evaluation

Instruction consisted of a 10 to 15 minute period for each client during which the instructor delivered verbal instruction, modeling, feedback and practice. All sessions began with the handshake and greeting and proceeded through

Table 4

Criterion for appropriate posture.

Posture of Legs and Feet	<u>Male</u> Knees no more than 12" apart with feet flat on floor or legs crossed. No leg shaking.	<u>Female</u> Knees together, feet flat on floor, or legs fully crossed. No leg shaking.
Posture of Head and Back	Head erect with jaw line parallel to floor and back touching or no more than 5" from back of chair.	Same as male
Posture of Arms and Hands	Hands resting on thighs or folded in lap. Arms crossed across chest. One hand or both hands folded on interviewer's desk top if not lean- ing forward more than 5" from chair back.	Same as male

the interview questions. Each client overheard the instruction of all participants. Immediately following an individual's instruction, a posttest was given on all 55 responses.

The program was evaluated through a modified reversal design. Clients were reinforced on a changing criterion schedule. Initially, they were given points to exchange for free time or items; later, only verbal approval given.

The phases were :

- 1) Phase I - Baseline (one client : one interviewer);
- 2) Phase II - (four clients : one interviewer) included instruction on first 35 items only with a posttest on all items;
- 3) Phase III - Instruction on all 55 items;
- 4) Phase IV - Reinstatement of baseline procedures (one client : one interviewer);
- 5) Phase V, - Instruction on all items with varying interviewers and a different office space; and
- 6) Phase VI - Consisted of two generalization probe interviews in the community with unfamiliar interviewers.

Each of the phases are described below.

Phase I: Baseline. Each client was assessed on all 55 responses in the program over a five to seven day period. The instructor led one client at a time to an interview room and said "We are going to practice having a job interview. I am an employer and I have an opening in my company for a general utility worker. You are going to interview for this job. Remember this is just practice. Hell-o, my name is Ms. Johnson." The instructor then recorded the responses of the client and said, "thank you. I'll call you and let you

know if you qualify for the job." When a stable baseline was established for all clients, Phase II was initiated.

Phase II: Instruction of first 35 responses. The average number of correct responses for all clients was 28 out of 55 items. Therefore it was decided to teach the first 35 responses. During this phase, training was given on the 35 responses only with emphasis on the responses not exhibited appropriately during baseline. This approach was adopted in order to avoid client confusion on language-type responses. After instruction the posttest was given on all 55 responses, however. All clients were present in the interview room while each received instruction and a posttest. Verbal instruction, modeling and feedback were given on the handshake, greeting, eye orientation and posture in sequence if needed according to the recording sheet. On all language items the instructor and the client sought to agree on an answer or a type of answer which was easy for the client to say and remember, but also gave the necessary information. "Yes, M'am," or "No, M'am" on yes or no questions, was encouraged if the client's speech was difficult to understand.

Posttest data was collected at the end of training session. No reinforcement was given during the post-test interview. At the end of the interview, each person received a point to exchange for free time or save for desired items, if they reached an individualized criterion set by the instructor. After criterion was met for three consecutive days Phase III was initiated.

Phase III: Instruction on 55 Responses. During this phase instruction proceeded as stated above; however, a point was delivered after the posttest interview only if the client responded appropriately on 50 of the items. After

three consecutive days at this criterion, the instructor reinstated baseline procedures.

Phase IV: Return to Baseline. This phase was identical to Phase I; however, data were collected over five days only.

Phase V: Multiple Interviewers/New Setting. The instructional procedures of Phase III were reinstated; however, a new interviewer participated every other day and a new office within the same building was selected as the interview room. Also, during Phase V points were no longer delivered. Verbal approval alone was given for reaching criterion. When a score of 50 was maintained for three consecutive days, Phase VI was initiated.

Phase VI: Generalization Probes. During this phase each client underwent a formal interview at two different offices in the community. One interview was with the county Director of Mental Retardation and the other with a University professor. Instruction was not given. The unfamiliar interviewer simply recorded the client's responses on the data sheet. No special reinforcement procedures were established, but rather, the interviewer was told to respond to the client as they would to any interviewee. A second rater was present and inter-rater reliability was established. Reliability coefficients ranged from .84 to .98 during Phase VI.

If the average of the client's responses dropped below 90% accuracy or 50 correct responses, the client would be returned to Phase V procedures for additional training.

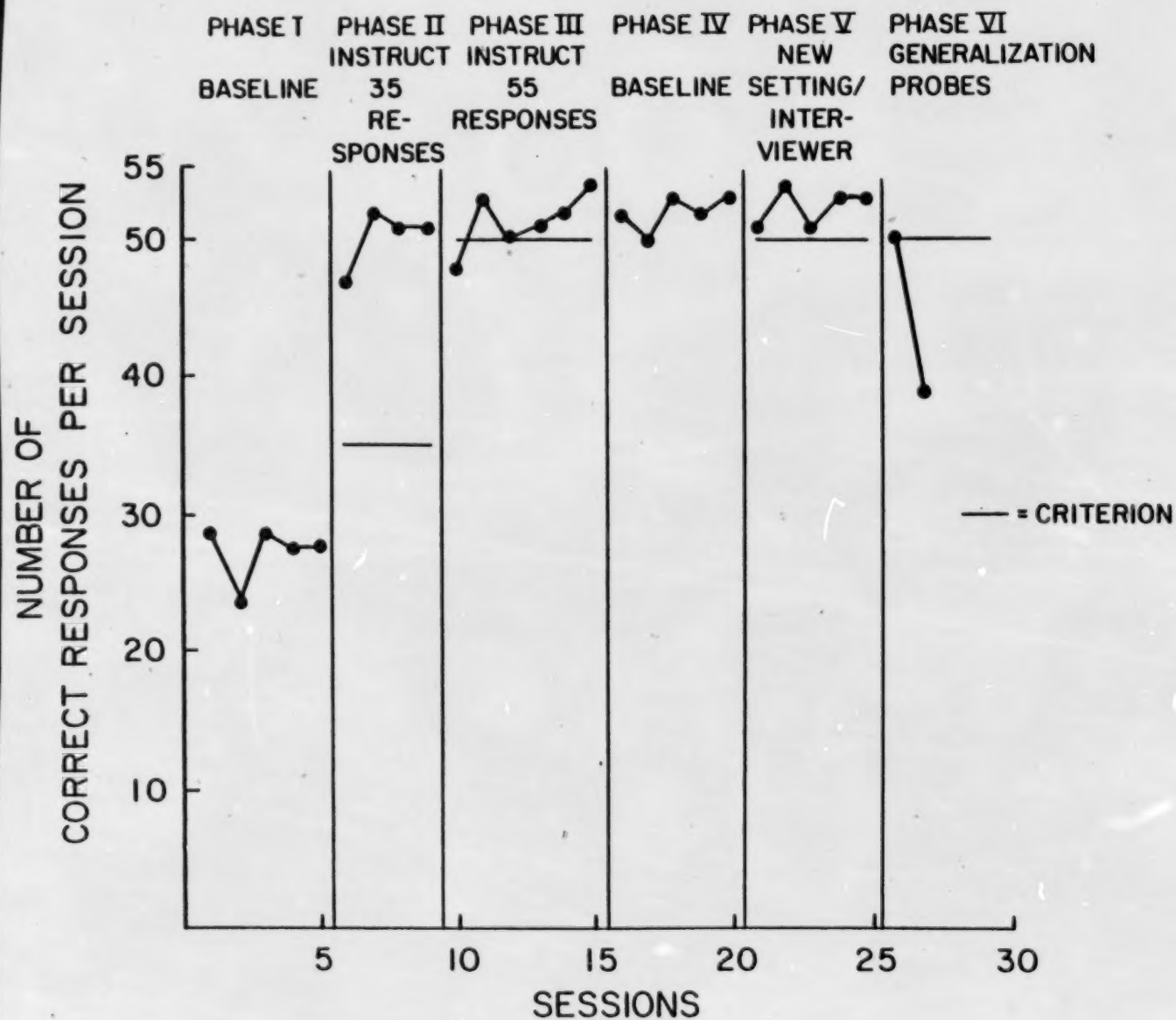
Results

Examination of Figures 1 through 4 reveal marked increases for all clients during the first instructional phase. Although instruction was given on only the first 35 responses in this phase, learning appeared to be generalized in that the average number of correct responses for all clients was 51.7. In Phase III, steady gains were found with all clients responding correctly to at least 50 of the items over an extended period. Reinstatement of baseline procedures in Phase IV produced minor decreases or variability in correct responding in all clients except John. The most marked decreases were found with Mike, the client who exhibited frequent verbally abusive behavior, within the center-based program. In Phase V, with the reinstatement of instructional procedures and with a new interviewer and office space, all clients again reached 90% accuracy in their responses. One client, Anne, whose progress is shown in Figure 4, temporarily left the program during this phase due to family illness. During the generalization probes of Phase VI, all three remaining clients reached the 90% criterion except for John during his second interview in the community. John was returned to the instructional procedures of Phase V; however, these procedures are in progress and could not be reported in this paper.

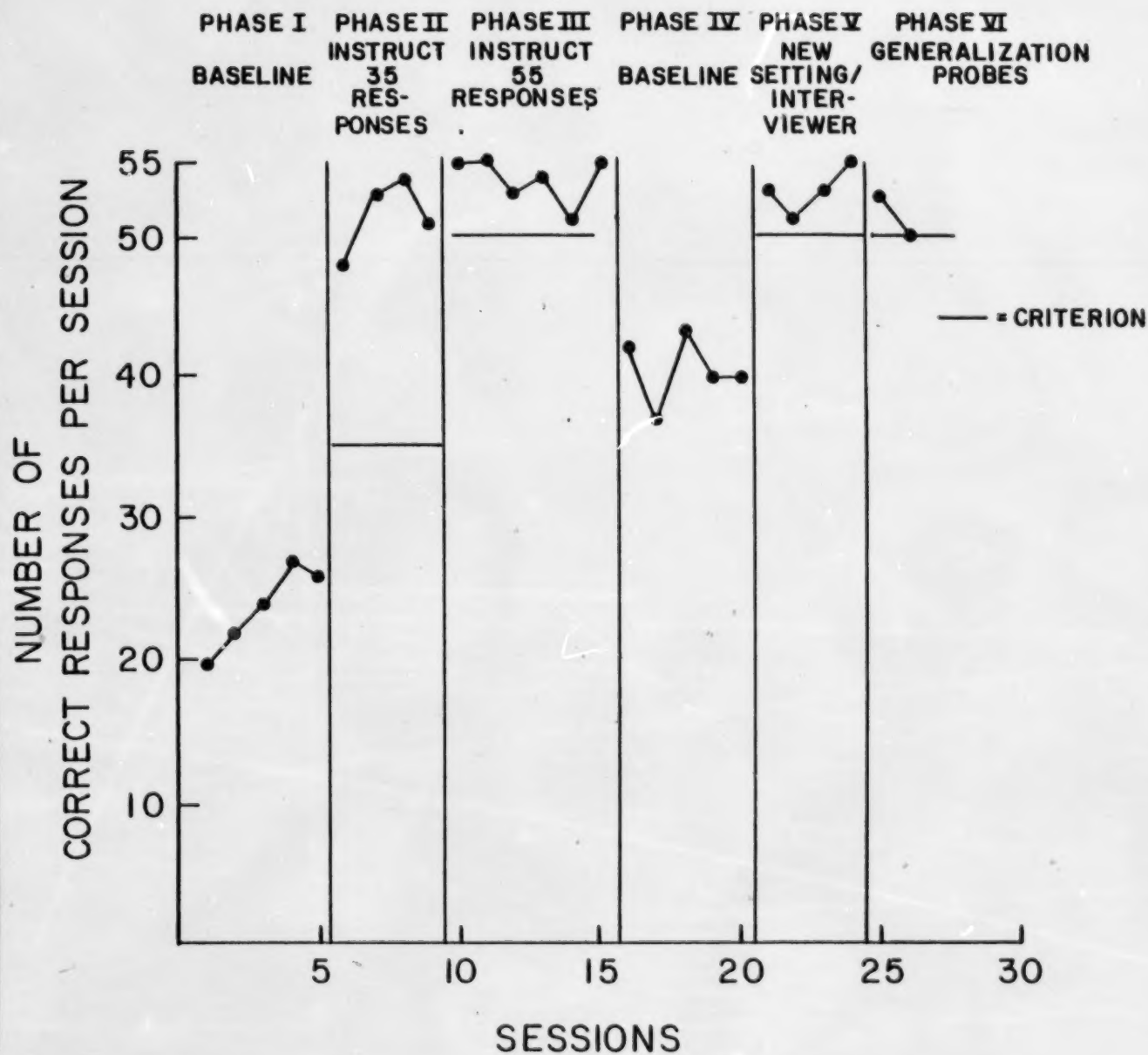
Discussion

The purpose of this paper is to demonstrate that vocational trainers can anticipate, plan for, and instruct clients in certain behaviors which usually will influence the outcome of a job interview. We can also assume that exhibiting these behaviors during an interview will tend to make a good

JOHN

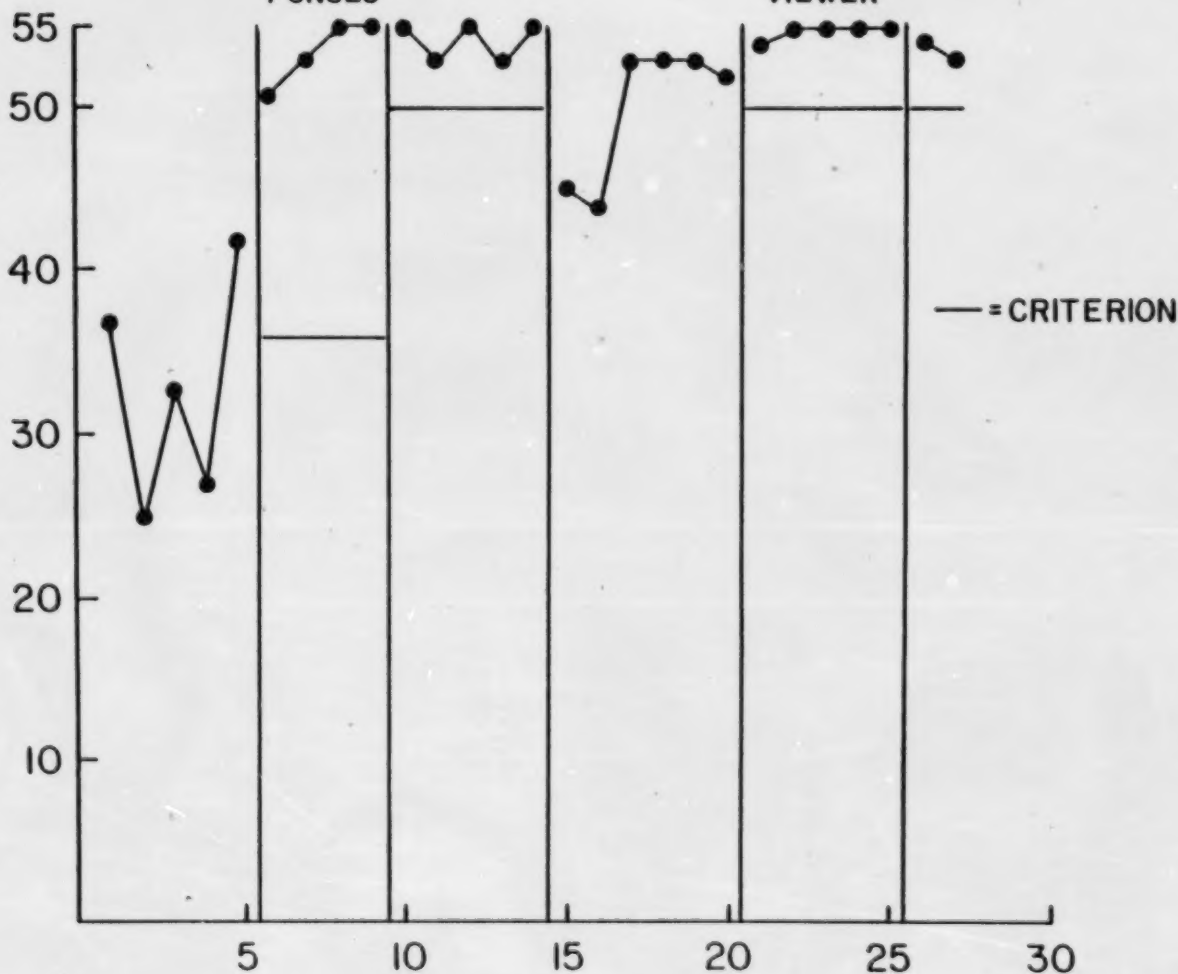


MIKE



MILDRED

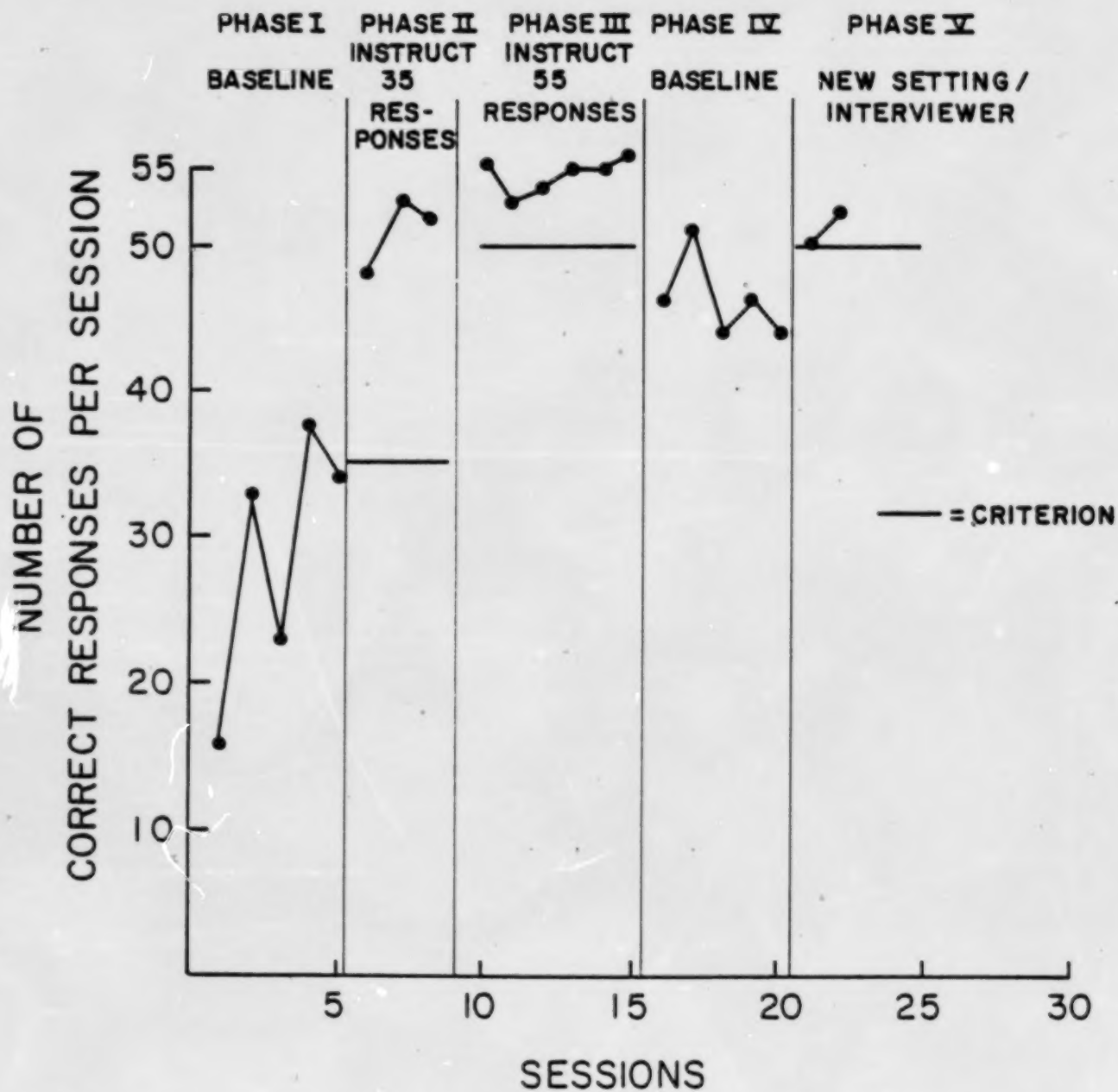
PHASE I PHASE II PHASE III PHASE IV PHASE V PHASE VI
 BASELINE INSTRUCT INSTRUCT BASELINE NEW GENERALIZATION
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 RES- INTER-
 PONSES VIEWER
 PROBES



SESSIONS

226

ANNE



impression on an employer and, thereby, give the client a better chance for employment. In addition, the present program revealed that the clients selected for this study exhibited only half of the simple prosocial behaviors prior to training; therefore, instruction was definitely needed.

Several positive features of this program may also be observed. First, all clients appeared to generalize responses learned during instruction on the first 35 items to the remaining program items. This leads to the conclusion that the clients understood that they must perform certain general types of behavior in order to influence the interviewer and not, simply, the responses upon which they received training. Secondly, due to the inclusion of all clients during each person's instruction, a degree of peer-pressure and peer-instruction developed spontaneously. This type of group feedback appeared not only to assist in correct responding but also seemed to influence job attitudes. For example, initially some clients stated that they only wanted to work part-time or that they were not sure they wanted a job immediately. As the program progressed, responses such as this were met with disapproval from the group as a whole. Finally, the program clearly pointed out the need for intermediate-step job interview experiences prior to actual job interviews in that one client's responses dropped below criterion during the second generalization probe. During the probe the client began to explain to the unfamiliar interviewer his uncertainty regarding transportation and personal restrictions placed on himself and other clients within his group home. Such responses would have inhibited his chances for a job if it had been a true job interview situation. Thus, this client needed training in withholding certain nonessential information with unfamiliar persons. This is a skill which may only be gained through experience and exposure to different interviewers and novel situations.

This program demonstrates that some mentally retarded persons may lack very simple prosocial behaviors useful during job interviews and that these behaviors can be gained through systematic instruction and be generalized to novel situations.